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## THE BIOLOGY OF METACORTICOID HYPERTENSION\*

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THE search for methods of treatment of human essential hypertension over the last half-century has led to the laboratory exploration of several dozen experimental counterparts. Most studies have been concerned with four major types of experimental hypertension: neurogenic, renal, renoprival and hormonal. In 1953 and 1954, Green<sup>1-4</sup> reviewed the similarities and differences among human and experimental hypertensions and concluded that "essential hypertension is simulated most closely, in both its physiologic and anatomic characteristics, by the post-DCA (metacorticoid) syndrome."<sup>1</sup> The purpose of the present report is to collect and review all of the available information on this syndrome that has appeared since its first description some 10 years ago.<sup>5</sup>

Metacorticoid hypertension is a self-sustaining disease that is no longer dependent upon a continuing overdosage with desoxycorticosterone acetate (DCA) and dietary sodium. It was first described, independently, by Prado<sup>6,7</sup> in São Paulo and Friedman<sup>8,9</sup> in Vancouver. Selye<sup>9</sup> likened the condition to the "meta-hypophyseal" and "meta-thyroid" diabetic states described by Houssay, and accordingly suggested the term "metacorticoid" in lieu of "post-DCA" or "self-sustaining." It is possible that in recent years the disease has been duplicated in the adrenal-regeneration hypertensive rat,<sup>10,12a</sup> but no reports have appeared to indicate that an unequivocal, self-sustaining hypertension has been produced in any other species by DCA and sodium, or in the rat by aldosterone, corticosterone, cortisone, cortisol, methylandrostenediol, the 2-methyl-9 $\alpha$ -halocorticoids, or the pituitary prin-

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ciples. There can be no doubt, however, that several of these substances are capable of doing so. That this might not be true for cortisone and cortisol<sup>18</sup> is indicated by the observations of Bergeron,<sup>14, 15</sup> who found that DCA plus cortisone, but not cortisone alone, produced metacorticoid hypertension in uninephrectomized, saline-fed rats. It is also unknown whether rats with dietary salt hypertension of long duration develop a self-sustaining hypertension.<sup>16</sup> It is tempting to believe that they would do so, because it is usually felt that DCA hypertension is nothing but an aggravated and accelerated form of salt hypertension.<sup>13, 17</sup> This is also suggested by a recent report<sup>101</sup> that adrenalectomized rats that had developed hypertension following 11 weeks on a high salt diet failed to show a fall in blood pressure when the 2% saline was replaced by 0.9% saline for another 11 weeks.

The routine production of metacorticoid hypertension in our laboratory involves the subcutaneous implantation in 75-gm. male rats of an extruded pellet containing a 2:1:1 mixture of DCA, Carbowax 4000 (Carbide and Carbon), and Flexowax C Light (Glyco Products). Each pellet is approximately 11 mm. long and 1.6 mm. in diameter, and weighs 40 mg. Immediately after implantation, the rats are offered only 0.86% sodium chloride solution as drinking fluid, and are kept for a three-month waiting period, after which they are considered to be "metacorticoid." Chemical analyses of the pellet remnants at this time have shown them to contain only 0.2 to 0.3% of the original amount of DCA.<sup>18</sup> Variations in the foregoing procedure are to be observed in other laboratories: DCA is injected in repeated injections, the rats are uninephrectomized, the excess sodium is provided only via the food, and a free choice is allowed between saline and water drinking fluids. It is felt that such differences in procedure do not result in qualitatively different forms of the hypertensive disease.<sup>13</sup>

#### PHYSIOLOGY AND PATHOGENESIS

Metacorticoid hypertension may be characterized by an exaggerated urinary excretion of sodium and water,<sup>19</sup> which is related to the duration of the disease,<sup>20</sup> the sodium and water load or intake,<sup>20, 21</sup> and the blood pressure level.<sup>20, 22</sup> The urinary sodium/potassium ratio is elevated.<sup>20</sup> When the rats are offered only saline or water to drink there is a relative polydipsia;<sup>10, 20, 23, 24</sup> when they are offered a free choice between the two a relative aversion to saline is exhibited.<sup>20</sup> The life expectancy of the metacorticoid rat is greatly reduced from normal,<sup>20, 25</sup> although individual rats may live a year or more after DCA implantation.<sup>20, 21</sup>

Friedman<sup>26</sup> has compared metacorticoid hypertensive with metacorticoid normotensive rats and found that both had normal plasma sodium and potassium, sodium clearance and adrenal histology, with a lowered glomerular filtration rate, decreased adrenal lipids, and overlapping histologic changes in the kidney. No pathologic difference between the two groups



was found. Although Prado<sup>6</sup> reported a slight (13%) decrease in respiration of the renal cortex of metacorticoid rats, he attached no significance to this because there were many tubular deposits of inert material, which presumably decreased the effective renal mass.

Gross and Schmidt<sup>27</sup> recently investigated the sodium and potassium concentrations in the plasma, aorta, skeletal muscle and heart of metacorticoid rats. They noted a hypernatremia, which had not been seen by others,<sup>10, 26, 99</sup> and an increase in aortic potassium and water, which appeared to be related to the degree of hypertension. Kidney renin remained depleted in the chronic stage. They were unable to associate metacorticoid hypertension with increased sodium content in any of the tissues investigated, thus confirming the earlier suggestions made by Daniel and Dawkins.<sup>100</sup>

TABLE 1  
Divisibility of the DCA-Triad by Different Procedures

Procedures	Effect of Procedure on Expected DCA Action			
	Increase in Blood Pressure	Production of Lesions	Increase in Fluid Exchange	References
Hesperidin methyl chalcone	0	I	0	87
SC-6584	I	0	I	47, 83, 88
Thyroidectomy	I	I*	0	70
Hypophysectomy	I	I	0	23, 94, 29, 45, 52, 54, 55, 60, 99
Hypophysectomy + ACTH	I	I	0	48, 55
Hypophysectomy + LAP	0	I	0	61, 64

I = inhibition of DCA action; 0 = no inhibition.

LAP = lyophilized anterior pituitary.

\* Periarthritis nodosa excepted.

On the other hand, Tobian and Redleaf<sup>99</sup> reported increased sodium and potassium in the aorta. Tobian<sup>28</sup> has reported a degranulation of the juxtaglomerular cells in association with metacorticoidism. The role that such a change might play is at present unclear.

The well-known triad of hypertension, vascular lesions and excessive fluid exchange found in rats undergoing active DCA-treatment is divisible by various kinds of treatment (table 1); it is therefore difficult to relate pathogenetically any one factor to another. Moreover, in any given experiment one usually finds one or more individual "normal" rats with blood pressures, pathologic lesions or fluid exchanges that are greater than one or more DCA-treated rats;<sup>21</sup> although these occurrences are usually hidden by the averaged data, and may in some cases reflect only errors of measurement, the observation may be of etiologic importance.

Raab<sup>29, 30</sup> has suggested a pathogenetic sequence of hypermineralocorticoidism, increased intracellular sodium, and arteriolar hyperreactivity to endogenous catecholamines. It is entirely possible that, once instituted,

hyperreactivity might not be easily reversible even though the electrolyte disturbances become compensated. Following Raab's line of thought, we<sup>18, 31</sup> found that anesthetized metacorticoid rats had approximately double the normal reactivity to the pressor effects of epinephrine, norepinephrine, renin, histamine, serotonin and Pitressin, while the hypotensive responses to the latter three drugs were not significantly altered from normal. Gross and Lichtlin<sup>32</sup> have recently confirmed this hyperreactivity in the case of epinephrine, norepinephrine, renin, purified angiotensin,<sup>33</sup> synthetic angiotensin II, Pitressin and Pituitrin. Friedman<sup>34</sup> has reported a heightened response to an osmotic stimulus for the release of antidiuretic hormone. It is interesting to note that the increased vascular reactivity of hypertensive rats is not reflected in the responsiveness of the isolated aortic strip;<sup>35, 36, 36a</sup> however, this preparation is notable for its unpredictability.<sup>37, 38</sup>

TABLE 2  
Effect of Endocrine Procedures on Metacorticoid Hypertensive Disease

Procedure	Effect	References
Castration	None	23, 39
Pregnancy	None	40, 41
Adrenalectomy	Intake ↓	10, 23, 39, 43
Sodium restriction	Survival ↑ (?), renal lesions ↓	18, 21, 23, 26, 39, 40-41
Potassium restriction	None	23, 39
Food restriction	None	52
Fasting + realimentation	Pressure ↓, no stress	53
Alloxan diabetes	Pressure ↓, survival ↓	10
Hypophysectomy	Pressure ↓, lesions ↓	23, 39, 48, 52, 54
Hypophysectomy + LAP + STH	Pressure ↓, lesions ↓	52
Hypophysectomy + thyroxin + STH	Pressure ↓, lesions ↓	52
Nephrectomy	Pressure ↓, intake ↓	71
Thyroidectomy	Pressure ↓, survival ↑, lesions ↑↓	23, 39, 56-58

Green<sup>20</sup> has theorized that the temporal sequence of events leading to metacorticoid hypertension involves sodium retention and a consequent increase in renal sodium and water output and a rise in blood pressure, followed by a negative sodium balance and an increased appetite for saline. When the disease has progressed to the metacorticoid stage, a series of "compensatory readjustments" has left the animal with an increased appetite for water, an aversion to saline, and a group of characteristic lesions. Friedman<sup>22</sup> concurs with this concept that the disease is incident upon basic changes in water and electrolyte metabolism. Perhaps the effect of DCA is more subtle than is usually recognized: DCA may retain sodium by "locking" it in sites from which it can be removed only with great difficulty; also, it seems plausible that it is not the sodium per se that is of prime importance, but its concentration relative to potassium and to water. Such early electrolyte abnormalities may then be responsible for a more-or-less irreversible vascular hyperreactivity, hypertension, pathologic lesions, and alterations in fluid exchange. However, as was pointed out earlier and in

TABLE 3  
Pharmacotherapy of Metacorticoid Hypertension

Drugs	Effects on Blood Pressure	References
CNS Drugs:		
Barbital	↓	23,39
Pentobarbital, anesth. dose	↓	23,39
Pentobarbital, sed. dose	0	10
<i>R. serpentina</i> root, Raudixin,		
alseroxylon, reserpine	↓	10,90,91
Chlorpromazine	↓	10
Autonomic Drugs:		
Epinephrine,* norepinephrine*	↑	18,31
Paredrine	0	10
Dibenamine	↓	23,39
Dibenzylamine	↓	10
Yohimbine*	↓	18,31
Hydergine	↓	10
TEA*	↓	18,31
Hexamethonium	↓	90
Mecamylamine	↓	10
Veriloid, Deravine	↓	10,90
Vaso-Active Drugs:		
Histamine,* serotonin*	Biphasic	18,31
Pitressin*	Biphasic	18,31,92
Hydralazine	↓	90,91
Polymyxin B Sulfate	↓	10
Heparin	↓	93-95
48/80	↓	93
Diuretics:		
SC-3858 (a pyrimidine)	↓	96
Mersalyl, urea, Pitressin	↓	96
Acetazoleamide, Phenergan	0	96
Chlorothiazide	↓	10,90
Corticoids:		
Cortisone, cortisol, DCA	0	10,29,43,48
Testoids:		
3,11,17-oxygen. deriv.	↓	42
17-imidazolyl deriv.	↓	46
Folliculoids:		
Diarylalkanonitriles	↓	43,44
Diethylstilbestrol	0	10
Estratriene deriv.	↓	45
Anti-Aldosterones:		
SC-5233	↓	84,85,85a
SC-8109	0	85,85a,86
Luteoids:		
Progesterone	0	10
SC-6584 and deriv.	↓	47,90-92,96
Norethynodrel	0	10,97
Miscellaneous:		
Calciferol + Ca	↑	23,39
Ascorbic acid	0	10
Renin*	↑	18,31,32
Pineal extract	0	10
Grollman's kidney extract	0	10
Antipituitary extract	↓	10
Thyroxine	↓	23,39
Propylthiouracil	↓	23,39
Parathormone	0	10

\* Anesthetized rats.

table 1, some rats can nevertheless develop hypertension, lesions or excess fluid exchange in the absence of one or both of the other symptoms, whether or not DCA has been administered at all. This fact has led us to ascribe the basic cause of these outward symptoms of the disease to some earlier, more fundamental disturbance.

#### ENDOCRINOLOGY

Metacorticoid hypertension is not dependent solely upon electrolyte and nervous participation, for investigations on the endocrine system in particular have revealed several "permissive" mechanisms that are necessary for the production and maintenance of the disease (table 2).

With regard to the sex hormones, castration,<sup>28, 39</sup> pregnancy,<sup>40, 41</sup> and the administration of progesterone<sup>10</sup> and diethylstilbestrol<sup>10</sup> do not affect the blood pressure of metacorticoid rats. Although several natural and synthetic compounds related to the testoids, folliculoids and luteoids have been found to be hypotensive (table 3), there was no relationship between the sex-hormone potency and the depressor potency.<sup>10, 42-47</sup> Nor have we ever been able to correlate hypotensive activity with anabolic, metrotrophic, osteotrophic, lipodiadic, prophlogistic or antiphlogistic activity.<sup>45, 47</sup> It appears that the hypotensive property found in some steroids is completely independent of other hormonal properties.<sup>47</sup>

The injection of pineal extract,<sup>10</sup> DCA,<sup>10</sup> cortisone<sup>10, 39, 43, 48</sup> and adrenocorticotrophic hormone (ACTH)<sup>39, 48</sup> is without significant effect in metacorticoid hypertension. Adrenalectomy does not influence blood pressure,<sup>10, 23, 39, 43</sup> cardiorenal hypertrophy<sup>23, 39</sup> or survival,<sup>10</sup> although it does decrease polydipsia;<sup>23, 39</sup> this ineffectiveness on blood pressure is true whether<sup>10</sup> or not<sup>23, 39, 43</sup> the sodium intake has been restricted. The replacement of the saline drinking fluid by tap water or the institution of a low-sodium regimen has no effect on the blood pressure,<sup>13, 21, 23, 36, 39, 49-51</sup> although it may<sup>23, 39, 51</sup> or may not<sup>13, 21</sup> increase survival and does appear to decrease the renal lesions.<sup>51</sup> A low potassium diet is without influence on the hypertension or relative organ weights, even though a loss of body weight is observed.<sup>23, 39</sup> Food restriction per se is ineffective,<sup>52</sup> but prolonged fasting lowers the blood pressure;<sup>53</sup> in the latter case, no stress of realimentation with high protein diets was observed.<sup>53</sup> The induction of alloxan diabetes greatly decreases survival, and the blood pressure is lowered to a degree that is not related to the severity of the diabetes.<sup>10</sup>

This brings us to the consideration of three endocrine organs that seem to play a definite and important role in metacorticoid hypertension: the pituitary, thyroid and kidney. Hypophysectomy reverses the hypertension and lesions in metacorticoid rats, but does not affect the fluid intake;<sup>23, 48, 52, 54</sup> the function of the pituitary is not completely restored by treatment with lyophilized anterior pituitary (LAP) plus ACTH, somatotrophic hormone

(STH) or thyroxin.<sup>52</sup> In suitably sensitized rats, however, STH, ACTH and thyrotrophic hormone (TTH) can institute or intensify hypertensive disease,<sup>49, 55-57</sup> and STH, with or without simultaneous treatment with cortisone, DCA and thyroxin, can cause cardiorenal hypertrophy in hypophysectomized rats.<sup>58</sup> What, then, is the pituitary factor necessary for the maintenance of metacorticoid hypertension? Indirect evidence is provided by the attempts to induce DCA hypertensive disease in hypophysectomized rats. Although there was some initial disagreement on this point,<sup>24, 52, 59, 60</sup> it now appears that DCA is incapable of inducing hypertension and lesions in hypophysectomized saline-fed rats, although polydipsia and polyuria do appear.<sup>48, 52, 61, 62</sup> The permissive action of the hypophysis cannot be completely replaced by the administration of parathyroid,<sup>61</sup> thyroxin,<sup>58</sup> antidiuretic hormone (ADH),<sup>63</sup> LAP,<sup>61, 64</sup> STH,<sup>52, 55</sup> LAP plus STH,<sup>52</sup> ACTH,<sup>48, 55</sup> STH plus ACTH,<sup>55, 65</sup> STH plus thyroxin,<sup>52</sup> or cortisone.<sup>59</sup> However, the effectiveness of the injection of whole pituitary<sup>61, 64, 65</sup> does indicate that some factor or critical combination of factors is present in the pituitary that is necessary for the production of DCA hypertensive disease.

Thyroxin appears to exacerbate metacorticoid hypertension.<sup>23, 39</sup> Propylthiouracil or thyroparathyroidectomy lowers the blood pressure, increases survival, and stops the progress of the cardiorenal hypertrophy and lesions;<sup>23, 39, 66-68</sup> interestingly, however, the periarteritis nodosa is enhanced.<sup>66, 68</sup> The situation is very similar to the acute effect of DCA in thyroparathyroidectomized rats: periarteritis is produced without an increase in blood pressure or fluid exchange and without the occurrence of the usual cardiorenal lesions.<sup>68-70</sup> That the parathyroids are not involved is indicated indirectly by the lack of effect of parathyroidectomy on the hypertension, polydipsia and organ weight changes induced by DCA or renal encapsulation, and by the nonhypertensive action of Parathormone in sensitized rats.<sup>10</sup>

Total or subtotal nephrectomy<sup>23, 71</sup> causes a fall of blood pressure that is related to the degree of hypertension of the metacorticoid rats. Several interesting interrelationships were reported in these studies:<sup>71</sup> blood pressure was related directly to the self-selection of sodium and inversely to the water appetite; urine volume and sodium following a saline load were directly related to the previous saline appetite. The hypotensive effect of nephrectomy was in general consistent with the earlier finding on DCA-hypertensive rats of vanden Bossche<sup>72</sup> and Guillemin and Selye,<sup>73</sup> but not with those of the Friedmans<sup>74</sup> and the Halls.<sup>75</sup> In spite of the effect of nephrectomy, no direct evidence to date has implicated the renin-angiotensin system in metacorticoid hypertension. The blood does not contain an increased concentration of renin,<sup>76</sup> the kidneys contain a decreased amount,<sup>27, 77</sup> and metacorticoid donor kidneys do not raise the blood pressure of normotensive recipients,<sup>78</sup> and they appear to have the normal capacity to lower the blood pressure of renal hypertensive recipients.<sup>50, 79, 102</sup> However, metacorticoid



rats differ from renal hypertensive rats in that normal kidney transplants fail to reverse the hypertension.<sup>102</sup> The kidney has also been implicated by the finding that the DCA-induced increase in muscle sodium required the presence of renal tissue, regardless of whether or not the kidney was functional.<sup>98</sup>

#### PHARMACOTHERAPY

As shown in table 3, the common hypotensive drugs are effective in various tests run in the metacorticoid rat: central depressants, autonomic blockers, "Bezold-stimulators," vasodilators and some diuretics. We have reported in the last several years a few synthetic steroids that have displayed hypotensive activity. These included a group of 11,17-oxygenated-4-androsten-3-ones,<sup>42</sup> 17-imidazolyl-androstenes,<sup>46</sup> 2,3-diarylalkanonitriles,<sup>43,44</sup> estratrienes,<sup>45</sup> 17 $\alpha$ -alkyl-19-nortestosterones,<sup>47, 80-83</sup> and a 17 $\alpha$ -lactone derivative of an androstenolone.<sup>84-86</sup> In the light of our experience, we have generalized that, on a per kilogram basis, the unanesthetized metacorticoid hypertensive rat requires some 10 to 100 times the clinical dose of a hypotensive drug in order to demonstrate activity. No drug has yet been reported that is capable of causing a permanent reversal of the hypertension, lesions and electrolyte disturbances.

#### SUMMARY

Metacorticoid hypertension is a self-sustaining disease in rats that is produced by temporary overdosage with desoxycorticosterone and sodium. It is characterized by elevated blood pressure and cardiovascular reactivity, vascular lesions, disturbances in salt and water metabolism, and decreased life expectancy. These factors appear, to some extent, to be independent of each other. The maintenance of the disease is dependent upon the pituitary, the thyroid and the kidney. Clinically active drugs are effective in causing transitory decreases of blood pressure in metacorticoid rats, although seemingly huge doses are often required.

#### SUMMARIO IN INTERLINGUA

Hypertension metacorticoide es un morbo auto-perpetuatori de rattos e es initiate per le administration temporari de un hyperdosage de acetato de disoxycorticosterona e natrium dietari. A causa del similitude anatomic e physiologic de hypertension metacorticoide in rattos con hypertension essential in humanos, nos presenta un revista e un discussion del litteratura concernite con ille morbo experimental. Metacorticoidismo es characterisate per elevate pression de sanguine, augmentate reactivitate cardiovascular, lesiones vascular, disturbance del metabolismo de sal e aqua, e un reducite superviventia probabile. Il pare que iste factores es, in un certe mesura, independente le unes ab le alteres. Le continuitate del morbo depende del presentia del glandulas pituitari e thyroide e del ren. Drogas de efficacia clinic succede a effectuar reductiones transitori del pression de sanguine in rattos metacorticoide, sed apparentemente enorme dosages es requirite in multe casos.

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## SOME ASPECTS OF DISORDERED PULMONARY FUNCTION IN MITRAL STENOSIS\*†

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PATIENTS with mitral stenosis frequently exhibit extensive structural changes in the lungs as a result of that disease.<sup>1,2</sup> All components of the pulmonary vascular bed may be affected to variable degrees, and alterations of an edematous and fibrotic nature are commonly observed in the alveolar membrane.

The extent to which these pulmonary changes influence the clinical picture in mitral stenosis is not clear. The studies of pulmonary function reported in the literature<sup>3,4,5,7,13</sup> show moderate deviations from the normal but have contributed little either to a basic understanding of the disease or to the clinical management of patients.

Several observations suggest, however, that the role of the lungs may be a significant one and that further exploration of this phase of mitral stenosis is warranted. Hyperventilation has been observed both at rest and during exercise in patients with mitral stenosis,<sup>4,5,6</sup> and recently a correlation has been reported between the degree of hyperventilation and the clinical severity of the disease.<sup>6</sup> In addition, the pulmonary diffusing capacity has been reported to be diminished in some patients<sup>5,7,13</sup> and has failed to increase postoperatively despite clinical improvement.<sup>5</sup>

Preliminary investigations in this laboratory<sup>8</sup> have shown that the degree of hyperventilation, quantitated in terms of the oxygen ventilatory equivalent, remains constant within a given subject and bears an inverse relationship to exercise tolerance. These findings suggest that the oxygen ventilatory equivalent might provide an index of the functional severity of mitral stenosis. The present study contrasts the respiratory response to exercise, measured in terms of oxygen ventilatory equivalent, with clinical status, and with the results of mitral commissurotomy. In addition, the relationship between the ventilatory abnormality and the structural changes in the lung is explored by studies of the pulmonary diffusing capacity. The contribution of such studies to the clinical assessment and to the management of patients will be discussed.

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## METHODS \*

Ventilatory studies were performed prior to operation in 65 patients. The studies were repeated following mitral commissurotomy in 22 patients. Pulmonary diffusing capacity was determined in 28 patients preoperatively, and 12 of these patients were studied again in the postoperative period. Mitral stenosis was the predominant lesion in each subject, and none of the patients exhibited clinical evidence of cardiac failure at the time of study. Postoperative determinations were performed at least three months following operation.

Observations were made during steady state exercise upon a motor-driven treadmill. The work performed was variable, but in each instance was estimated to be a moderate load relative to the capacity of the individual. All measurements were made during the sixth minute of exercise. Duplicate measurements during the fifth minute served as a check upon the steady state in the majority of the studies.

Minute ventilation was measured from expired air collected in Douglas bags by a mouth piece and low resistance respiratory valve (dead space, 85 ml.). Samples of mixed expired air were analyzed in duplicate for oxygen and carbon dioxide in the Haldane apparatus and oxygen consumption was calculated. The oxygen ventilatory equivalent<sup>9</sup> was derived from the formula:

$$\text{Oxygen ventilatory equivalent (O}_2\text{V)} = \frac{\text{Minute ventilation 1/min. BTPS}}{\text{Oxygen consumption 1/min. STPD}}$$

Pulmonary diffusing capacity was determined during exercise by a modification of the steady state carbon monoxide technic.<sup>10</sup> Inspired gas mixtures contained 0.040% to 0.090% carbon monoxide in air. Alveolar carbon dioxide tensions, used instead of arterial blood tensions, were calculated from samples of terminal expired air collected in the Henderson-Haggard trap<sup>11</sup> and analyzed in the Haldane apparatus. Carbon monoxide was measured by an infrared analyzer, Liston Becker Model 15A. No correction for partial pressure of carbon monoxide in the blood has been attempted.

\* Explanation of terms:

Oxygen ventilatory equivalent: the volume of air breathed per liter of oxygen consumed, here used as an expression of the ventilatory response to exercise.

Pulmonary diffusing capacity: the volume of a gas that diffuses across the pulmonary membrane under unit pressure gradient; an expression of the surface area and thickness of the pulmonary alveoli.

STPD: standard temperature and pressure, dry.

BTPS: body temperature (37° C.), ambient pressure, saturated with water vapor.

Steady state: a state of equilibrium achieved by the adaptive mechanisms of the body during constant physiologic conditions, here defined as relative constancy from minute to minute of pulmonary ventilation, oxygen consumption, carbon dioxide output and respiratory quotient.

Pulmonary compliance: an expression of the elastic properties of the lungs, usually defined as the volume change in the lungs per unit change in intrathoracic pressure.

## RESULTS

Figure 1 illustrates the oxygen ventilatory equivalent values in 65 patients. Clinical classification is according to the criteria of the New York Heart Association.<sup>12</sup> With a single exception, those classified in grade 1 exhibit values for oxygen ventilatory equivalent that fall within the normal range. All the remaining patients show elevated values, and a progressive rise is observed with increasing clinical severity of the disease.

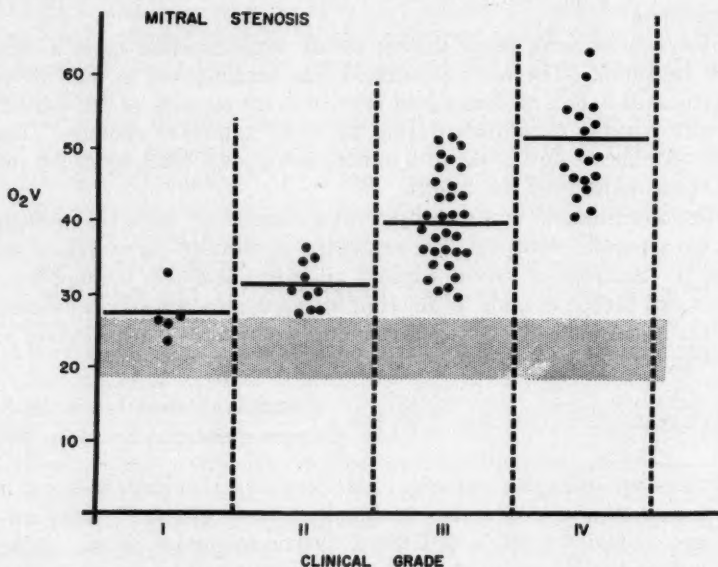


FIG. 1. Correlation between clinical classification and oxygen ventilatory equivalent in 65 patients with mitral stenosis. The shaded area indicates the normal range of oxygen ventilatory equivalent. Mean values for each group are indicated by the solid lines.

Tables 1 and 2 summarize the clinical and laboratory data in 39 of these patients. Data for the remaining 26 patients illustrated in figure 1 are not shown because only preoperative ventilatory studies are available in these patients.

The preoperative and postoperative values for oxygen ventilatory equivalent are depicted in figure 2. Fourteen of the 22 patients studied showed an appreciable fall in oxygen ventilatory equivalent in the postoperative period. Clinical improvement, indicated in table 2, was parallel to the changes in oxygen ventilatory equivalent. Seven of the remaining patients showed no significant change postoperatively despite subjective improvement. Three of these were patients in whom preoperative values were only slightly elevated and symptoms were minimal. One patient deteriorated

clinically following operation, and the oxygen ventilatory equivalent was found to have increased.

Despite substantial reduction in oxygen ventilatory equivalent, those patients in whom the initial values were grossly elevated failed to return to the normal range postoperatively.

TABLE 1  
Essential Data and Clinical Status of 39 Patients

Name	Sex	Age	Height, Inches	Weight, Pounds	B.S.A., M <sup>2</sup>	Clinical Grade
R. B.	F.	28	72	115	1.68	I
C. P.	M.	43	70	155	1.88	I
A. R.	F.	42	69	130	1.72	III
E. F.	F.	48	62	119	1.48	II
M. F.	F.	39	62	107	1.46	II
A. V.	M.	34	63	158	1.75	II
S. B.	M.	31	66	150	1.77	II
L. P.	F.	49	62	168	1.77	III
F. M.	M.	30	66	146	1.74	III
A. F.	M.	30	67	136	1.72	II
J. S.	M.	41	69	156	1.86	III
R. W.	M.	41	69	130	1.72	II
S. W.	F.	38	64	132	1.64	II
G. C.	F.	45	63	114	1.52	II
A. D.	F.	39	60	140	1.60	III
G. L.	F.	33	64	120	1.58	II
M. M.	F.	27	65	105	1.50	III
A. P.	F.	54	60	136	1.58	IV
F. G.	F.	26	63	98	1.43	III
R. C.	F.	30	65	106	1.51	III
J. V.	M.	30	67	110	1.58	IV
M. R.	M.	46	66	170	1.86	III
R. M.	F.	38	60	106	1.42	III
C. C.	F.	30	61	105	1.44	III
M. N.	F.	52	64	126	1.60	III
I. W.	F.	38	65	101	1.48	IV
S. M.	F.	50	65	123	1.60	IV
G. V.	F.	55	60	135	1.58	IV
S. V.	F.	29	62	106	1.46	III
R. P.	M.	30	67	160	1.84	II
M. H.	F.	35	66	123	1.63	IV
T. S.	F.	40	63	107	1.48	III
J. M.	F.	30	63	124	1.58	III
A. K.	F.	33	64	93	1.42	III
W. Y.	M.	42	65	110	1.54	IV
A. M.	M.	41	73	153	1.96	III
R. L.	M.	38	69	158	1.86	IV
E. M.	F.	46	63	110	1.50	III
R. S.	M.	41	71	128	1.78	IV

Diffusing capacity was measured prior to operation in 28 patients, and the results are illustrated in figure 3. The subjects have been divided into four groups according to the oxygen ventilatory equivalent values (see legend). This manner of grading has been adopted for two reasons: (1) It is probable, as subsequent discussion will show, that oxygen ventilatory equivalent is a more accurate index of disability than is clinical assessment. (2) Grouping in this fashion allows the diffusing capacity to be contrasted



with increasing ventilatory abnormality as measured by the oxygen ventilatory equivalent.

Patients in group 1, with no limitation of exercise tolerance, had diffusing capacities within the normal range. Those in the remaining three

TABLE 2  
Laboratory Data

Name	Preoperative					Postoperative					
	$V_E$ l/ min./M <sup>2</sup> B.T.P.S.	$V_{O_2}$ l/ min./M <sup>2</sup> S.T.P.D.	O <sub>2</sub> V	DCO/ M <sup>2</sup>	Clinical Grade	$V_E$ l/ min./M <sup>2</sup> B.T.P.S.	$V_{O_2}$ l/ min./M <sup>2</sup> S.T.P.O.	O <sub>2</sub> V	DCO/ M <sup>2</sup>	Clinical Grade	Time in Mos. Postop.
R. B.	20.8	0.909	22.9	19.0	I	—	—	—	—	—	—
C. P.	14.9	0.572	26.0	16.4	I	—	—	—	—	—	—
A. R.	10.8	0.410	26.4	14.4	III	—	—	—	—	—	—
E. F.	20.5	0.748	27.4	14.2	II	—	—	—	—	—	—
M. F.	14.0	0.507	27.6	14.3	II	15.6	0.582	26.8	14.9	I	5
A. V.	20.4	0.700	29.1	13.7	II	23.5	0.844	27.9	13.1	I	11
S. B.	21.5	0.706	30.5	—	II	18.1	0.943	19.2	—	I	10
L. P.	15.1	0.494	30.6	10.8	III	16.8	0.527	31.8	10.1	I	3
A. F.	23.4	0.712	32.8	11.7	II	—	—	—	—	—	—
F. M.	18.2	0.571	31.9	—	III	15.8	0.570	27.8	—	II	27
J. S.	13.9	0.423	32.9	9.4	III	17.3	0.624	27.8	10.8	II	16
R. W.	18.4	0.535	34.4	11.6	II	—	—	—	—	—	—
G. C.	14.1	0.407	34.7	9.5	II	—	—	—	—	—	—
S. W.	15.4	0.446	34.6	9.8	II	24.2	0.630	38.4	6.3	II	4
A. D.	16.5	0.460	35.8	9.2	III	20.4	0.532	38.4	9.5	II	3.5
G. L.	14.1	0.393	35.8	8.4	II	—	—	—	—	—	—
M. M.	13.6	0.349	38.9	9.3	III	21.8	0.695	31.4	9.3	I	16
A. P.	12.5	0.410	30.6	8.4	IV	—	—	—	—	—	—
F. G.	10.9	0.275	39.7	—	III	8.8	0.261	33.8	—	II	4
R. C.	17.4	0.438	39.7	8.7	III	19.2	0.464	41.4	9.0	II	8
J. V.	13.9	0.345	40.3	—	IV	17.3	0.445	38.8	—	III	24
M. R.	8.7	0.212	40.8	—	III	14.1	0.475	29.6	—	I	51
R. M.	13.9	0.321	43.2	7.9	III	—	—	—	—	—	—
C. C.	23.4	0.531	44.1	8.6	III	20.8	0.698	29.8	10.6	II	16
M. N.	14.7	0.330	44.6	6.8	III	—	—	—	—	—	—
I. W.	17.9	0.397	45.0	10.0	IV	—	—	—	—	—	—
S. M.	12.9	0.277	46.4	—	IV	24.8	0.456	54.4	—	IV	26
R. P.	31.3	0.667	47.0	9.9	II	—	—	—	—	—	—
M. H.	17.7	0.372	47.5	10.2	IV	20.1	0.512	39.2	11.5	II	5
G. V.	9.2	0.197	46.8	—	IV	13.2	0.335	39.3	—	III	36
S. V.	24.6	0.523	47.1	—	III	27.8	0.762	36.5	—	I	4
T. S.	12.1	0.253	47.8	6.2	III	14.6	0.318	45.9	7.3	IV	10
J. M.	11.8	0.220	49.0	—	III	18.7	0.500	37.4	—	II	36
A. K.	18.7	0.369	50.6	11.3	III	18.9	0.547	34.5	11.1	II	13
R. L.	20.5	0.377	54.4	6.9	IV	—	—	—	—	—	—
W. Y.	19.2	0.377	51.0	—	IV	15.0	0.418	35.9	—	II	12
E. M.	25.5	0.432	59.0	11.3	III	—	—	—	—	—	—
A. M.	16.1	0.314	51.3	—	III	26.2	0.755	34.7	—	I	24
A. S.	21.1	0.299	70.7	6.8	IV	—	—	—	—	—	—

groups showed values that were distinctly low. Although variations occurred from individual to individual within each group, the mean values in groups 2, 3 and 4 did not differ significantly. No correlation was apparent between the diffusing capacity and the oxygen ventilatory equivalent in these patients.

Figure 4 presents in graphic form the results of diffusing capacity studies in 12 patients before and following mitral commissurotomy. No significant change in diffusing capacity was observed following operation. In contrast to these findings, 11 of the patients were considered to be improved by clinical grading, and six showed a significant decrease in oxygen ventilatory equivalent in the postoperative period.

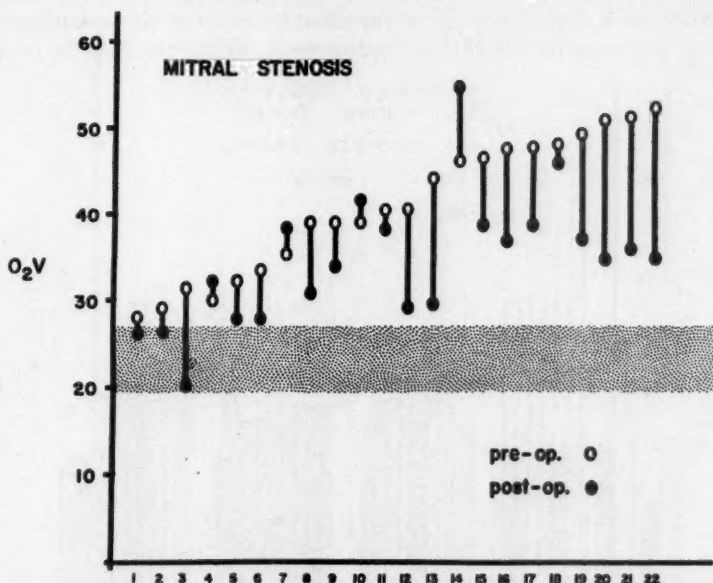


FIG. 2. Oxygen ventilatory equivalent values before and following mitral commissurotomy in 22 patients. Each patient is represented separately. Preoperative values are indicated by open circles, postoperative values by closed circles. The shaded area indicates the normal range of oxygen ventilatory equivalent.

### DISCUSSION

*Ventilatory Response to Exercise:* The oxygen ventilatory equivalent was elevated in all patients of grade 2 severity or greater, and rose progressively through successive clinical grades. Following mitral commissurotomy, the majority of patients showed a decrease in oxygen ventilatory equivalent consistent with the clinical improvement. The system of clinical grading used for comparison in these studies was essentially an estimate of exercise tolerance based upon the statements of the patient. In view of the subjective element inherent in this form of assessment, the correlation observed between oxygen ventilatory equivalent and clinical status in figure 1 is reasonably precise. No overlap is observed between grades 2 and 4, and that in grade 3 probably expresses the difficulties in accurate clinical grading.

Elevation of oxygen ventilatory equivalent indicates an increased ventilatory response to exercise, i.e., hyperventilation. The results presented show that patients with mitral stenosis hyperventilate to a degree which parallels the limitation in exercise tolerance as assessed by clinical grading. Following operation, this hyperventilation decreases in proportion to the improvement in exercise tolerance.

The consistency of the elevation of oxygen ventilatory equivalent, the correlation with clinical severity of the disease, and the alterations postoperatively which mirror the clinical improvement, all indicate that the oxygen

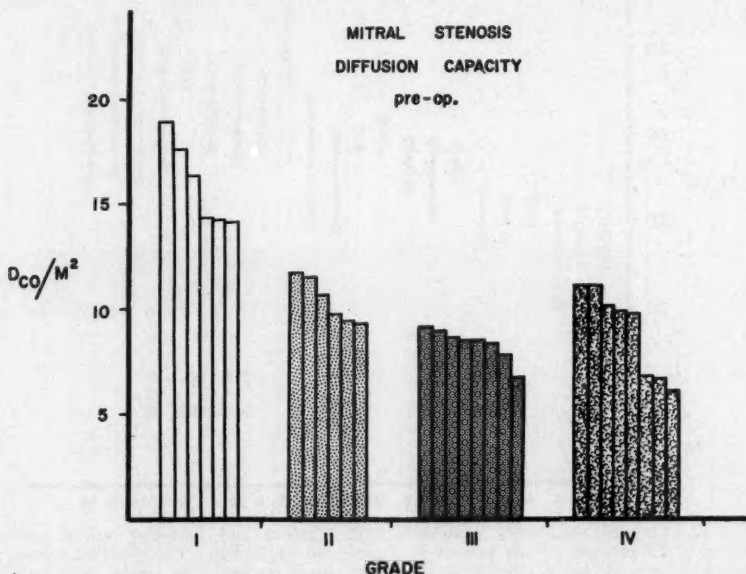


FIG. 3. Preoperative diffusing capacity values for carbon monoxide in 28 patients. Each patient is represented separately. Grading is according to oxygen ventilatory equivalent values: Grade I, oxygen ventilatory equivalent less than 30. Grade II, oxygen ventilatory equivalent 30 to 35. Grade III, oxygen ventilatory equivalent 35 to 45. Grade IV, oxygen ventilatory equivalent greater than 45.

ventilatory equivalent provides an objective means of assessing the functional severity of mitral stenosis and the results of the operation.

*Diffusing Capacity Studies:* The studies of pulmonary diffusing capacity demonstrate impairment of diffusion of carbon monoxide in those patients with reduced exercise tolerance. No improvement in diffusing capacity has been observed following mitral commissurotomy during the three to 16-month postoperative period included in this investigation.

Reduction of pulmonary diffusing capacity can be caused either by a decrease in the effective capillary bed of the lungs or by changes in the alveolar membrane which impair diffusion of gas across the membrane.

It is probable that both factors are operative in producing the low diffusing capacities observed in mitral stenosis. Pathologic studies<sup>1,2</sup> of the lungs in this disease reveal foci of fibrosis that involve the capillary bed and undoubtedly decrease the area available for gas transfer. In addition, thickening of alveolar membranes is commonly described and might be expected to act as a barrier to gas transfer. Edema of the alveolar walls does not appear to be a contributory factor, in view of the failure of diffusing capac-

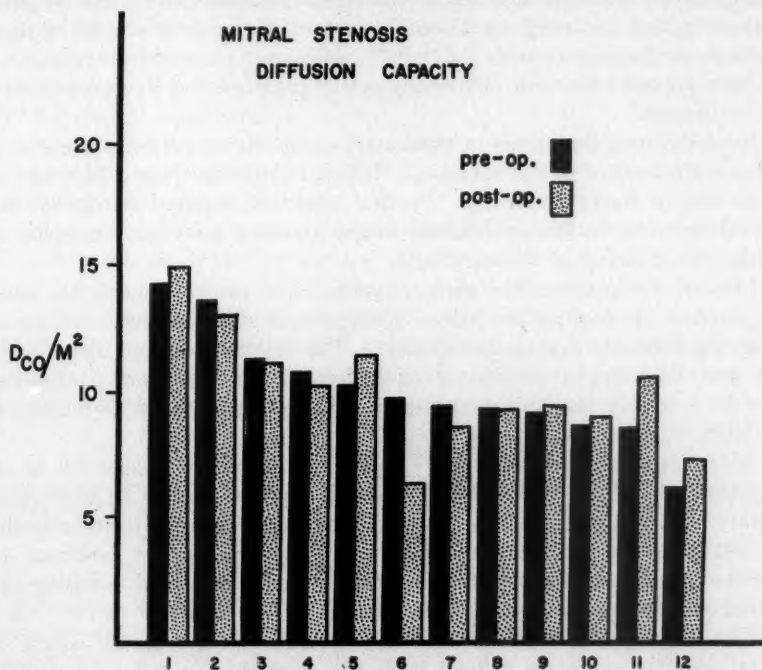


FIG. 4. Preoperative and postoperative diffusing capacity values for carbon monoxide in 12 patients. Each patient is represented separately. Closed columns indicate preoperative values. Shaded columns indicate postoperative values.

ities to increase postoperatively. It seems likely, therefore, that the irreversible pulmonary damage demonstrated by these diffusing capacity studies is caused by permanent changes involving both the alveolar walls and the pulmonary capillary bed.

*Theoretic Considerations:* The cause of the hyperventilation in patients with mitral stenosis is not known. The present studies suggest that the pulmonary damage reflected by the low diffusing capacities is not directly responsible for hyperventilation. Successive groups of patients in figure 3 hyperventilate to an increasing degree, as evidenced by the oxygen ventilatory equivalent values, despite which no change in diffusing capacity is

apparent in the latter three groups. Moreover, the decrease in hyperventilation postoperatively in the absence of change in diffusing capacity precludes a direct relationship between the two.

An alternative explanation may be sought in the alterations in hemodynamics that occur with mitral stenosis. An association between the hyperventilation and the changes in the pulmonary artery pressure or in total pulmonary resistance appears to be the most likely possibility. Both pulmonary artery pressure and total pulmonary resistance are elevated preoperatively, and following operation the pattern of change is similar to that observed in the hyperventilation.<sup>14, 15, 16</sup> Moreover, a positive correlation has been reported between pulmonary artery pressure and hyperventilation in this disease.<sup>6</sup>

Recently, too, alterations in pulmonary compliance have been associated with the dyspnea of mitral stenosis,<sup>17, 18, 19</sup> and thus may play a part in the production of hyperventilation. Further study is required to clarify the interrelationships between pulmonary artery pressure, pulmonary compliance and hyperventilation in these patients.

*Clinical Application:* The clinical evaluation of mitral stenosis has been hampered in the past by the lack of a simple and objective means of measuring the disability due to that disease. The results presented above indicate that the oxygen ventilatory equivalent, determined during exercise, provides a readily available, accurate and objective assessment of functional disability in these patients.

Elevation of oxygen ventilatory equivalent cannot be considered to be diagnostic of mitral stenosis, since this is a common finding in many pulmonary and cardiac disorders. Nor will such studies serve to indicate the patients who will benefit from operation. They do appear, however, to provide an objective classification of patients and a means of assessing the results of treatment.

The effect of the impaired diffusing capacities on the clinical course of mitral stenosis cannot be defined from the available data. It is apparent, however, that the lung damage may be both severe and permanent. Diffusing capacities of the order observed in these studies represent marked respiratory restriction and might be expected to result in considerable incapacity to the individual. However, the presence of a low diffusing capacity preoperatively does not mean that the patient will fail to benefit from operation. Many of those patients who show a substantial decrease in oxygen ventilatory equivalent postoperatively have grossly impaired diffusing capacities. It is possible, nevertheless, that the postoperative improvement may be limited in patients with severe lung damage. Figure 2 shows that those in whom the initial oxygen ventilatory equivalent was grossly elevated failed to return to normal values following operation. This indicates a residual disability. Should the residual disability prove to be related to permanent lung damage in these patients, then the preoperative determina-



tion of diffusing capacity may make a valuable contribution to the assessment of prognosis in mitral stenosis.

### SUMMARY

The ventilatory response of patients with mitral stenosis has been measured by the oxygen ventilatory equivalent during steady state exercise. Elevated oxygen ventilatory equivalent values were found in all patients in whom the severity of disease was clinical grade 2 or greater. The degree of elevation observed was proportional to the functional disability of the patient, assessed according to clinical grading. Following mitral commissurotomy, patients exhibit a fall in oxygen ventilatory equivalent consistent with the clinical improvement.

It is considered that the oxygen ventilatory equivalent provides an objective method of classification of patients with mitral stenosis and a means of assessing the results of therapy.

Pulmonary diffusing capacity determined during exercise by the steady state carbon monoxide technic was low in each patient with reduced exercise tolerance. No change in diffusing capacity was observed following operation. These results suggest the presence of irreversible lung damage in patients with mitral stenosis. It is postulated that this lung damage may be responsible for the failure of some patients to return to normal exercise tolerance following operation.

### ACKNOWLEDGMENTS

We wish to express our thanks to Dr. Douglas G. Cameron for his help and encouragement, and to Dr. H. J. Scott, who performed the surgery. We are grateful also to Mrs. V. McLaughlin, Miss C. Becker and Miss Y. Frei for their technical assistance.

### SUMMARIO IN INTERLINGUA

Le responsa ventilatori de patientes con stenosis mitral esseva mesurate per le equivalente ventilatori de oxygeno durante exercitio in stato equilibrial. (Equivalente ventilatori de oxygeno = volumine de aere respirate per litro de oxygeno consumite; stato equilibrial = stato de stabilitate relative ab un minuta al proxime in ventilation pulmonar, consumption de oxygeno, rendimento de dioxydo de carbon, e quotient respiratori.) Augmentate valores del equivalente ventilatori de oxygeno esseva constatate in omne le patientes in qui le severitate del morbo esseva del secunde grado clinic o plus. Le grado del elevation observate esseva proportional al incapacitate functional del patiente, evalutate secundo gradation clinic. Post commissurotomy mitral, le patientes exhibiva un reduction del equivalente ventilatori de oxygeno in conformitate con le melioration clinic.

Es opiniate que le equivalente ventilatori de oxygeno pote esser usate como base de un classification objective del patientes con stenosis mitral e como indice in le evaluation del resultados del therapia.

Le capacitate de diffusion pulmonar (= le volumine de gas que se diffunde a transverso le membrana pulmonar, determinate pro le magnitudine unitari del gradiente de pression), mesurate durante exercitio per le methodo a monoxydo de carbon in stato equilibrial, esseva basse in omne patiente in qui le tolerantia de exercitio esseva reduce. Nulle alteration del capacitate de diffusion esseva observate post le opera-

tion. Iste resultados suggere le occurrentia de irreversibile damnos pulmonar in patientes con stenosis mitral. Es postulate que le damno pulmonar es possibilmente responsabile pro le facto que certe patientes non re-attinge un normal tolerantia de exercitio post le experientia de commissurotomy mitral.

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## STREPTOCOCCAL INFECTION IN A SCHOOL POPULATION: PRELIMINARY REPORT \*†

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A STUDY of streptococcal infection and carrier rates in a school population has been conducted in Philadelphia since September, 1955. The ultimate purpose of this program is to determine effective and practicable methods of community control of beta-hemolytic streptococcal infection with a view to the primary prevention of rheumatic fever.

Controlled studies from a number of sources<sup>1,2</sup> have shown that prompt and continued treatment of streptococcal infections of the throat may greatly reduce the incidence of primary attacks of rheumatic fever following such infections. This evidence has been obtained largely from military establishments, in which population groups are at the risk of epidemic transmission of infectious disease, and in which, under military management, infection may be subjected to well organized and controlled epidemiologic studies. The question to which this current study has been directed is whether children of school age, the group most vulnerable to rheumatic fever, can be protected from first attacks of rheumatic fever in a manner similar to that found to be effective in military groups.

Accordingly, three schools in a school district of South Philadelphia were carefully selected to furnish for study a population of approximately 1,000 children. During the school year, clinical, epidemiologic and bacteriologic data have been obtained from the children and, where indicated, from their family contacts. These data have been studied to determine: (1) the carrier rate of beta-hemolytic streptococci, (2) the rate of clinically manifest streptococcal infection, and (3) the effect of various treatment programs on both the carrier rate and the rate of clinically manifest infection in the population studied.

### METHODS

The three schools were selected with the aid of the Medical Division of the Board of Education with consideration of such factors as administrative

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coöperation, relative homogeneity of the population group, and proximity of the schools to the bacteriologic laboratory. These schools have been designated below as schools G, B and W. The children are from families of the lower socio-economic level. Some variation in race could not be avoided, the nonwhite pupil census in school W (20%) being greater than that in schools G and B (1%).

Preliminary steps were taken to inform the children, parents, teachers, school physicians and family physicians about the nature and purpose of the study. Written permission for participation in the program was obtained from 1,157 of a total of 1,350 children registered in the three schools during the year 1955-56; and 1,087 of a total of 1,356 children participated in the study during the year 1956-57.

Beginning in November, 1955, throat cultures were taken routinely from each child once a month throughout the school year. Cultures were also taken in the school or at home from any child developing one or more of the following symptoms or signs:

1. Fever over 101° F.
2. Hyperemic pharynx, with or without symptoms.
3. Cervical adenopathy.
4. Earache.
5. Purulent discharge from the nose or ears.

Two trained technicians were responsible for taking all of the routine cultures and cultures on all absentees. A school nurse from each of the three schools who was trained in culture technics secured cultures from the children reporting ill to the infirmary.

A daily absentee list was obtained from the school authorities, and contact by telephone was attempted to determine the reasons for absence. Home visits were made to secure cultures from children absent with symptoms and signs suggestive of streptococcal illness and also when telephone contact could not be established. If the only complaint was that of sore throat, objective evidence of pharyngeal inflammation was elicited before a throat culture was taken. When the children attending school G or school B were found to have cultures positive for beta-hemolytic streptococci on routine culture, or associated with illness, throat cultures were taken from family contacts of these children.

For all children with symptoms of illness in whom the culture was found to be positive, a second culture (follow-up) was taken three weeks after the initial positive report.

To study the over-all effectiveness of systematic penicillin therapy, different schedules of treatment were established for each of the schools, as follows:

1. School G: penicillin for all children with positive cultures (whether carriers or having symptoms of infection), and for all family contacts having a positive culture.

2. School B: penicillin for only those children who developed any of the symptoms noted above and for whom the throat culture was positive concomitantly.
3. School W: no penicillin recommended or provided.

Thus the treatment schedule in the three schools varied in that it was intended to eradicate streptococci from the throats of all children in school G (and the families of these children), whether the streptococci were associated with symptoms or merely with the carrier state, whereas in school B penicillin was provided only to children with suggestive symptoms and positive throat cultures. For the children in school W, no penicillin was provided or recommended, but reports were forwarded to the family when a child with suggestive symptoms was found to have a positive culture. A summary of the treatment schedule appears as follows:

	Symptoms Plus Positive Cultures	Carriers	Family Members with Positive Cultures
School G	+	+	+
School B	+	-	-
School W	-	-	-

At the outset it was intended to alternate oral penicillin \* and parenteral penicillin † to determine the effectiveness of each method of therapy. However, objections to parenteral therapy were such from both parents and family physicians that this method of treatment was discontinued and oral penicillin only was used, in doses of 200,000 units of penicillin-G four times a day for 10 days. This was provided without cost to the children or to their families.

Blood sera were obtained in each year of the study for antistreptolysin-O determination from a representative group of pupils. (See accompanying paper.) Adequacy of treatment was determined 10 days after original illness by telephone contact with parents. No pill counts were attempted.

Laboratory methods are described in detail in an accompanying paper and are therefore summarized only briefly here. During the first year of the study, routine monthly swabs taken from all children were enriched for 18 hours in Pike's broth. Then a loopful of inoculum was obtained from the broth and streaked on horse blood neopeptone agar. Throat swabs from children with symptoms of infection were obtained in duplicate; one swab was treated as above, the other was immersed in plain broth and then streaked on horse blood neopeptone agar immediately upon arrival in the laboratory. During the second school year (1956-57), poured plates were used instead of surface cultures. All swabs (from routine cultures or from cultures of children with symptoms) were placed in tubes containing 2 ml. of sterile broth, and upon arrival in the laboratory a calibrated loopful of the broth was used as an inoculum in 15 ml. of melted neopeptone agar containing 4% sheep's blood.

\* Pentids supplied by E. R. Squibb and Sons.

† Bicillin injection, long-acting, supplied by Wyeth Laboratories.



TABLE 1  
Percentage of Children with One or More Positive Cultures for  
Beta-Hemolytic Streptococci During the School Year

School.....	G		B		W	
	1955-56	1956-57	1955-56	1956-57	1955-56	1956-57
Number of children	233	248	456	385	468	454
Percentage with one or more positive cultures	53.6	47.5	46.9	56.8	47.4	68.2

### RESULTS

During each of the years of the study, approximately one-half of the children in the three schools had beta-hemolytic streptococci in their throats at some time during the year (table 1). The routine cultures from healthy

TABLE 2  
Percentage of Positive Cultures for Beta-Hemolytic Streptococci in Carriers and in  
Patients with Symptomatic Infections

School.....	G		B		W	
	1955-56	1956-57	1955-56	1956-57	1955-56	1956-57
Number of cultures	2052	2369	4150	4244	3394	3458
Number of positive cultures	147	220	417	518	517	986
Percentage positive as carriers	71.5	80.6	75.9	86.0	90.5	98.0
Percentage positive as symptomatic infection	28.5	19.4	24.1	14.0	9.5	2.0

children accounted for the large majority of the positive cultures in all three schools (table 2)

As seen in table 3, the proportion of positive cultures resulting from the routine monthly throat swabs varied from 7.4% in school G to 14.6% in school W during 1955-56, and in 1956-57, from 10.1% in school G to 28.8% in school W. These percentages represent the average monthly

TABLE 3  
Average Monthly Streptococcal Carrier Rates by Schools

	School G			School B			School W		
	N.	Positive	% Positive	N.	Positive	% Positive	N.	Positive	% Positive
1955-56	1,520	113	7.4	2,576	337	13.1	2,854	416	14.6
1956-57	1,726	175	10.1	2,504	389	15.5	3,036	876	28.8

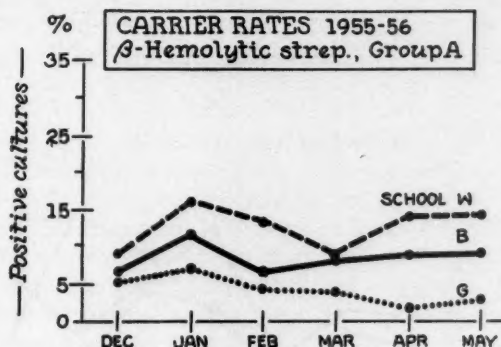


FIG. 1.

carrier rate. The higher carrier rates during the second year did not appear to be associated with any significant difference in the respiratory infection attack rates, since these attack rates were nearly the same during both years; however, these higher rates may have been due, at least in part, to the change in cultural methods noted above, with an increase in positive cultures found by use of the poured plates instead of surface cultures.

The seasonal variation in carrier rates of group A streptococci is shown for each of the three schools for each year in figures 1 and 2. Here it appears that in school G, where efforts were directed toward eradication of streptococci from the throats of children and their families, the carrier rates were consistently lower than in the other two schools. Also, it is of interest to note that there is no significant increase in the carrier rate in school G during the winter and early spring months, when an increase might ordinarily have been expected.

The incidence of respiratory infections accompanied by positive cultures for beta-hemolytic streptococci is shown in figures 3 and 4. In 1955-56 a minor increase in the infection rate was apparent in the early spring

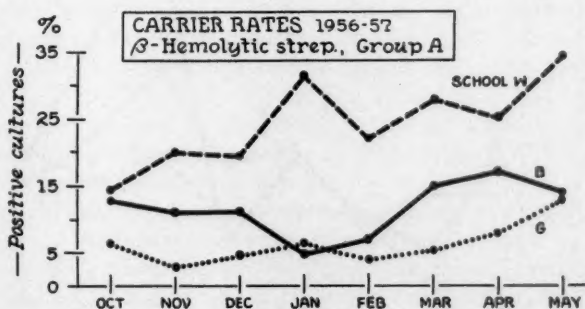


FIG. 2.

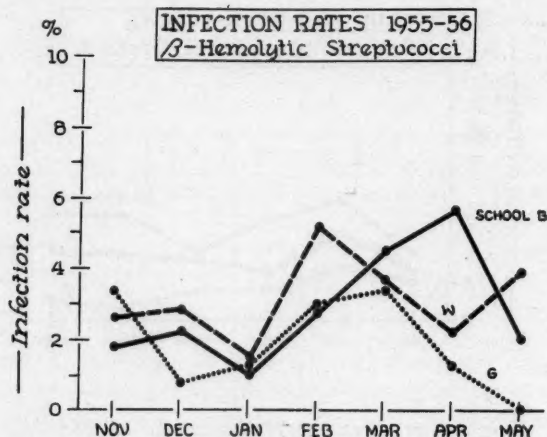


FIG. 3.

months. In the spring of 1957 there was a greater increase in symptomatic streptococcal infection in all three schools, reaching a peak in March. The greatest number of infections was reported in school B, despite the fact that the carrier rate in this school was approximately one-half that of school W at the same time (15% as compared with 28%). In 1956-57 the over-all yearly attack rates for respiratory infections accompanied by positive cultures for group A beta-hemolytic streptococci was 16.1% in school G, 19.3% in school B and 18.7% in school W.

The proportion of children in each of the three schools with persistently positive routine cultures on an asymptomatic or carrier basis for three

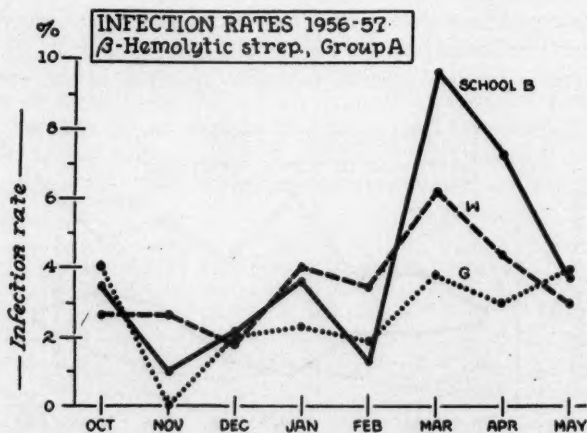


FIG. 4.

months or more was as follows:

School G		School B		School W	
1955-56	1956-57	1955-56	1956-57	1955-56	1956-57
2.1	8.5	8.1	12.5	11.3	31.8

The above figures indicate that the percentage of persistently positive cultures in the children of school G, in comparison with the higher rates in school B and the highest rate in school W, varied directly with the extent of antibiotic control attempted. Of those children attending school G who had persistently positive cultures despite attempts at eradication by penicillin therapy, it was generally found that there had been lapses in treatment, or that the streptococci were of a group other than group A, particularly where streptococci were of groups B or C.

TABLE 4  
Percentage of Positive Streptococcal Cultures from Children with  
Symptoms Taken at Home and at School

	Home			School		
	Total N.	Positive N.	Positive %	Total N.	Positive N.	Positive %
1955-56						
School G	180	32	17.8	29	2	6.9
B	257	58	27.6	209	22	10.5
W	308	87	28.3	63	14	22.3
Total	745	177	23.8	301	38	12.6
1956-57						
School G	162	40	24.9	30	5	16.6
B	245	74	30.1	249	55	22.1
W	258	85	32.9	76	25	32.8
Total	665	199	30.0	355	85	22.9

With regard to the cultures obtained from children with symptoms suggestive of streptococcal infection (table 4), it is clear that the swabs taken from children at home resulted in a significantly higher proportion of positive cultures than did the swabs taken from children with symptoms who attended school (with the exception of school W, where there was little difference in 1955-56 and no difference in 1956-57). The higher rate of positive cultures obtained at home might have been anticipated, since these children were generally more severely ill with their infections and for this reason were kept home by their parents.

The small difference between cultures at home and at school in the school with the high carrier rate may be explained by the fact that even on random swabbing there was an increased chance of obtaining a positive culture. Review of the symptomatology associated with the illnesses, however, revealed no difference in children from any of the schools.

The grouping and typing data for the streptococci obtained from asymptomatic children (carriers) in 1956-57 are tabulated in table 5. The most impressive fact revealed by these figures is the high proportion of group A streptococci which were not typable with any of the available type-specific sera. Approximately 63% of the streptococci were group A in school G, 75% in school B and 81% in school W. Of these group A isolates, how-

TABLE 5  
Streptococcal Groups and Types Isolated from Carriers (1956-57)

	Groups Isolated					Types Isolated																Non- typable	
	A	B	C	G	Non- group	1	3	5	6	8	11	12	19	28	33	36	44	46					
																			N	Per- cent- age			
Oct. G B W	15 41 55	5 4 5	0 4 2	2 0 2	0 0 0		3	2	1	1	1	3		2				3 4 4	11 24 40	73.3 58.7 72.9			
Nov. G B W	7 36 74	7 1	1 3	2 6 1	0 2 0	1 4			1			1	1	3			1	2	6 27 61	85.7 75.0 82.4			
Dec. G B W	10 34 74	1 4 5	2 10 0	0 0 2	1 2 4	1		1		1					1		3 14		10 28 58	100.0 82.5 78.4			
Jan. G B W	14 14 114	1 6 9	0 3 1	0 3 1	2 3 4		3		6				4	1			4 4		10 9 100	71.4 64.2 87.8			
Feb. G B W	9 26 84	3 9 4	10 3 6	0 3 5	1 2 3	1 1			1 4 2				4 3			1		2	8 20 71	89.0 77.0 84.6			
Mar. G B W	11 47 108	3 7 4	10 1 6	0 1 4	0 8 10			2 2 15	1					1 1			1 1 1	7 32 81	8 32 81	72.6 68.2 75.0			
Apr. G B W	16 50 97	4 1 7	0 0 5	0 0 1	1 1 14		2 1	2 1	15	1			2 7	1			1	1	13 44 147	81.2 88.0 85.5			
May G B W	27 41 129	4 2 5	2 2 2	0 0 1	1 1 2		4		4	1							1		23 36 94	85.0 87.8 72.8			
Total-Yearly G B W	289 109 735	28 40 30	25 27 25	4 9 17	6 19 37		12 13	5 3	9 71	2 4	1 1	1 1	11 26	1 11	6 3		1 1 5	7 21 21	1 1 1	89 220 652	81.7 76.1 80.5		

ever, approximately 80% did not fall into any recognized type, this proportion of nontypable streptococci being relatively constant in the three schools. The groups and types of the streptococci isolated are reported only for the year 1956-57, since the data from the previous year are incomplete at the present time. Of the types that were obtained, types 1, 5, 12 and 44 appeared in somewhat greater numbers than did the remaining types, but no predominating type was found. It was also noted that there was no tendency for typable strains of streptococci to spread either in the individual classrooms or in the family groups.



A summary of the data for the grouping and typing of streptococci obtained from cultures of symptomatic children in 1956-57 is shown in table 6. Here it is seen that the proportion of group A streptococci is consistently higher than that obtained from the cultures of carriers. The typability of these group A streptococci, however, parallels that obtained from the carriers, with the proportion of untypable strains as follows: 61.5% in school

TABLE 6  
Streptococcal Groups and Types Isolated from Children with  
Symptomatic Infection (1956-57)

	Groups Isolated (Number)					Types Isolated														Non- typable	
	A	B	C	G	Non- group	1	3	5	6	12	19	28	32	33	36	44					
																	N	Per- cent- age			
Oct. G B W	1 11 10	0 1 0	0 0 0	0 0 0	0 0 0		1					1				1	0 9 8	0 81.8 80.0			
Nov. G B W	0 3 10	1 0 0	0 0 0	0 2 0	0 0 0					2		1					0 2 8	0 33.3 80.0			
Dec. G B W	4 6 7	0 0 0	1 4 0	0 1 0	0 1 1											1 1 1	3 5 6	75.0 83.3 85.6			
Jan. G B W	5 10 14	0 0 0	0 1 0	0 0 0	0 0 0					2						1 1 2	2 9 12	40.0 90.0 85.5			
Feb. G B W	4 5 13	0 0 1	3 4 0	0 2 0	0 0 5			2			1 1		1				2 3 12	50.0 60.0 92.4			
Mar. G B W	8 30 24	1 0 0	0 1 1	0 2 0	0 1 0	1		2 2 2		1							2 24 21	6 80.0 87.5			
Apr. G B W	6 21 17	1 2 0	0 0 1	0 0 0	1 2 1		1		1 2 6							1 2	4 18 8	66.6 85.8 47.1			
May G B W	8 11 11	0 0 0	0 0 0	0 1 0	0 0 0	3 1								1			5 10 9	62.5 90.9 81.8			
Total G B W	36 97 106	3 3 1	4 3 10	0 8 2	1 4 7	3 3	1	5 4 11		2 2 4		2	1			3 5 6	22 80 84	61.5 82.5 80.0			

G, 82.5% in school B and 80.0% in school W. Again, as in the cultures from the carriers, types 1, 5, 12 and 44 were the types isolated most frequently, with no marked predominance of any type. At no time, even during the period of relatively high symptomatic infection, was there any increase in frequency of the typable strains of streptococci.

A study of the cultures obtained from the families of children with positive cultures indicated very little relationship between the presence of streptococci in the throats of one of the family members and in the throats

of the children themselves. Of the original 113 positive carrier cultures found during the course of the school year in school G, only six family contacts were found with the same (or possibly the same) type-specific strain of streptococcus, and among these six are included two for whom the cultures from both school child and contact were untypable. Similarly, in this same school, only three of 34 of the symptomatic children with positive cultures were found to have family contacts with similar type-specific strains. In school B, nine of 337 carriers and four of 80 children with symptomatic infection had family contacts with the same type of streptococcus. Carrier rates among family contacts were approximately the same as those obtained in school children in 1955-56; in 1956-57 the rates were lower.

Practical problems prevented the use of the poured-plate procedure for contact cultures. Inasmuch as these were usually taken in the evening, a time when regular laboratory personnel were not available, the cultures were routinely placed in enrichment broth (Pike's) for 12 hours and then processed by the poured-plate method on the succeeding morning. This variation in technics must be considered in evaluating the relatively lower carrier rate found in family contacts than in school children.

The frequency of occurrence of various symptoms and signs considered to be suggestive of streptococcal infection is shown below as the percentage of these symptoms and signs appearing in children whose throat cultures were found to be positive and in those whose throat cultures were found to be negative for beta-hemolytic streptococci:

Frequency of Symptoms and Signs

	Children with Positive Culture	Children with Negative Culture
1. Red throat without exudate	59%	62%
2. Fever over 101° F.	30%	19%
3. Cervical adenopathy	30%	16%
4. "Minor" symptoms (GI symptoms, fever under 101° F., rhinorrhea)	15%	14%
5. Red throat with exudate	9%	10%
6. Earache, purulent nasal discharge	7%	9%

Here it is noteworthy that only 9% of the children with positive cultures were identified as having exudative pharyngitis, the condition usually described as characteristic of streptococcal sore throat. Positive cultures were obtained with greatest frequency in children with undifferentiated upper respiratory tract symptoms.

Approximately 10% of the children having both symptoms and positive cultures in schools B and G had positive follow-up cultures with the same type of streptococcus three weeks after the initial infection. In school W, 27.6% of the children had positive follow-up cultures with the same type of streptococcus. With the carriers, from whom such follow-up cultures were positive it was generally found that either no therapy or incomplete treatment had been given to the children. In school W, only 2% of chil-

dren with positive cultures received complete treatment and 25% partial treatment as judged by American Heart Association standards.<sup>3</sup>

Two cases of rheumatic fever occurred in the group studied, both in the 1955-56 school year. One of these was a child attending school B, who had symptoms of an acute streptococcal infection over a weekend and was partially treated by a family physician. The child subsequently developed classic signs of rheumatic carditis. The other was a child attending school W who had been absent from school for six weeks because of a social problem in the family. During the sixth week of his absence he too developed classic signs of rheumatic carditis.

#### DISCUSSION

The data showing the proportion of positive cultures resulting from the routine monthly throat swabs are of special importance. These data indicate that the monthly range is from 7 to 28.8%. When these carrier rates were considered cumulatively for the school year, it was found that approximately one-half of the school population in each of the three schools was found to harbor beta-hemolytic streptococci without clinical manifestations of infection.

Similar observations have been made in widely separated sections of the United States, suggesting that streptococci in the throats of children may be more frequent than is suspected. Quinn and his associates,<sup>4</sup> reporting from Nashville, Tennessee, found carrier rates for hemolytic streptococci among school children to be considerably higher than those in our schools. In 1953-54 they obtained weekly carrier rates ranging from 43% to 60%, and bi-weekly carrier rates from 26% to 42% in 1954-55.

Their cumulative carrier rates for the school year ranged from 57% to 88%, and of their positive cultures nearly 84% were identified as group A. They too found that many of their group A isolates were untypable, as only about half of the streptococcus strains obtained by them (51.2%) could be identified as type-specific, with types 1, 6 and 12 found most frequently. Comparable data from other sources also indicate a high carrier rate of beta-hemolytic streptococci. Pike and Fashena<sup>5</sup> reported that 42% of the children observed by them had serologically identifiable streptococci isolated on throat culture, of which group A streptococci accounted for 25%. Streitfeld and Saslaw<sup>6</sup> found that 35.9% of a group of children in Miami harbored beta-hemolytic streptococci in their throats during an eight-month period in 1954. Similar figures have been reported from San Francisco by Rantz<sup>7</sup> and in England by Holmes and Williams.<sup>8</sup>

In our study, relatively few of the children with symptoms of respiratory infection had cultures positive for hemolytic streptococcus. Among the 1,087 children observed during the school year 1956-57, there were 1,020 symptomatic infections in a total of 856 children, with positive cultures in 27% of these infections. In experienced hands, an accurate clinical diag-

nosis of streptococcal infection may be expected in about 70 to 75% of children with symptomatic infection.<sup>9,10</sup> Our figure of 27% positive cultures among symptomatic children may indicate an overzealous attitude on the part of our technicians, who sought not to overlook any potential infection. The use of partially trained, nonmedical observers to determine whom to culture reduces the accuracy of clinical diagnosis even further.<sup>15,16</sup> Analysis of the symptoms associated with infections in children with positive cultures reveals that only 10% were noted to have exudative pharyngitis. This sign was found with equal frequency in symptomatic children with negative cultures. Of these infections, 90% may be said to represent clinically undifferentiated upper respiratory disease. Such a figure compares with the experience of the Army Respiratory Disease Commission<sup>11</sup> and The Cleveland Family Study,<sup>12</sup> which found only 3 to 6% of respiratory infection to be streptococcal in etiology. Even where streptococci were found in culture, only a small percentage (38%) represented streptococcal infection when investigated serologically.

Despite the large number of throat cultures found to be positive in the population studied, we have not encountered an incidence of streptococcal infection which might be considered to be comparable to that found in the studies in closed populations,<sup>13</sup> in which rheumatic fever has been prone to follow streptococcal infection of the throat with an attack rate of approximately 3%.

The treatment schedule described above was applied in school G to determine the effect of penicillin in full therapeutic doses intended to eradicate streptococci from all children and from all family contacts having positive cultures, whether the positive cultures were associated with infection or were merely present on a carrier basis. This schedule did seem to reduce the carrier rate and effected a minor reduction in the incidence of respiratory infection associated with a positive culture for streptococci in children of this school, apparently preventing the seasonal rise in carrier rates and infection manifest in schools B and W. In an epidemic situation the importance of such control measures has been adequately demonstrated.<sup>14</sup> However, even during a nonepidemic year, in order to obtain this effect over one-half of the children in this school and many family contacts were treated with penicillin during the course of the school year.

These observations would seem to have a direct bearing upon the type of community program which was reported by Bunn and Bennett<sup>15</sup> and which has been adopted subsequently in other communities. (Six such programs for streptococcal detection are now functioning throughout the State of Pennsylvania.<sup>16</sup>) In these programs, attempts have been made to discover and then to treat streptococcal infection among school children, the ultimate purpose being to prevent the primary attack of rheumatic fever. The method, with some variation from community to community, has consisted of a public health nurse obtaining cultures from the throats of chil-



dren complaining of sore throats or presenting other symptoms of upper respiratory infection in the school or occasionally at home. If the throat culture has been found to be positive for beta-hemolytic streptococcus (without reference to serologic group), penicillin is recommended in full therapeutic dosage. In most of these community efforts the percentage of positive cultures among children with respiratory infections approximates (or is lower than) that reported in the present study.

Recently Phibbs et al.<sup>17</sup> reporting on the "Casper Project," claimed to have reduced the incidence of rheumatic fever in a community by rigidly excluding from school any child with a respiratory infection who harbored streptococci in his throat until he received penicillin treatment. The figure cited in their report of a new case rate for rheumatic fever of 0.3 per thousand children does not differ significantly from that in the Philadelphia school system, in which no program of comparable nature is in operation. Further, it can be noted that to carry on a similar type of program all streptococcal carriers must be excluded from school until rendered culture-negative, and that even in a nonepidemic year this procedure might involve 50% or more of a school population. The wisdom of this type of community program is questioned and must be reconsidered in the light of (1) the high proportion of children who may be considered to be streptococcus carriers, and (2) the relatively low proportion of respiratory infection (including exudative pharyngitis) which is streptococcal in etiology.

We wish to emphasize that this is a preliminary report of results obtained to date. Study of the same school age population will be continued. One of the objectives of the continuing study will be to determine whether the incidence of streptococcal infection and streptococcal carriers will be maintained throughout additional school years and respiratory seasons at approximately the same levels as those we have observed during the two years of this report.

Since there has been such a consistent disproportion between the carrier rate and infection rate for streptococci, it would seem profitable to study more intensively the significance of a positive culture.

In addition to bacteriologic study of the pharyngeal flora of carriers and children with respiratory infection, blood sera will be obtained to detect the presence of various streptococcal antibodies, and antibodies against a series of viral respiratory agents. It is hoped that the added emphasis on serologic technics will aid in determining the presence of subclinical streptococcal infection or associated viral infections or both.

#### SUMMARY AND CONCLUSIONS

An epidemiologic study of streptococcal infection has been conducted among 1,000 Philadelphia school children and family contacts since November, 1955. They have been followed to determine the carrier rate, the rate



of clinically manifest infection, and the effect of various programs of treatment with penicillin on both the carrier rate and the rate of infection.

1. In each of the school years, approximately one-half of the children had one or more positive cultures for beta-hemolytic streptococci, regardless of attempts to control carriers by penicillin treatment.

2. The rate of clinically manifest streptococcal infection remained relatively low in all schools, independent of the existing carrier rate or treatment programs instituted.

3. Relatively few of the children with respiratory symptoms had positive cultures for beta-hemolytic streptococci, and even in the group with positive cultures most of the children presented symptoms of undifferentiated respiratory tract illness.

4. Most of the beta-hemolytic streptococci isolated were of group A, but among these a large percentage was untypable.

5. The poured-plate method of growing streptococci permitted a significantly higher recovery rate than did any enrichment method or direct streaking method tried.

6. In view of the data presented in this preliminary report, we question the efficacy of the currently popular programs based upon mass culturing of school children and penicillin treatment for those found to harbor streptococci in their throats.

#### SUMMARY IN INTERLINGUA

Un studio epidemiologic de infectiones streptococcal es in progresso de post novembre 1955 inter 1.000 scholares in tres scholas de Philadelphia e inter le membros de lor familias con qui illes se trova in contacto. Le ultime objectivo del programma es determinar efficace e practic methodos pro le lucta, in le communitate plus tosto que in le individuo, contra infectiones per streptococcus hemolytic beta e assi promover le prevention primari de febre rheumatic. Esseva colligite datos pro establir (1) le frequentia de portatores de streptococcus hemolytic beta, (2) le incidentia de infectiones symptomatic in cata un del tres scholas, e (3) le effecto que varie programmas therapeutic exerce super le frequentia de portatores e le incidentia de infectiones inter le scholares e lor contactos familial.

In omne le classes, circa un medietate del scholares habeva un o plure culturas positive de streptococco hemolytic beta, e isto non esseva alterate per essayos de restringer le stato de portator per tractamentos con penicillina. Le incidentia del clinicamente manifeste infectiones streptococcal remane relativemente basse in omne le scholas e es independente del frequentia de portatores e del programmas therapeutic. Un relativemente basse procentage del scholares con symptomas respiratori habeva positive culturas pro streptococco hemolytic beta, e mesmo in le gruppo con culturas positive, le majoritate del individuos presentava symptomas de non-differentiate morbos del vias respiratori. Le majoritate del streptococcus isolate pertineva al gruppo A, sed in un grande procentage de istos, il non esseva possibile identificar le typo.

Le efficacia del currentemente favorate programmas therapeutic—que se basa super culturaciones in massa e le tractamento con penicillina de omne le scholares in le gurgites de qui le presentia de streptococcus ha essite discoperite—pare questionabile, viste (1) le alte procentage del juveniles qui pote funder como portatores de

streptococcus e (2) le relativamente basse proportion de infectiones respiratori que es streptococcal in lor etiologia.

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## A STUDY OF STREPTOCOCCAL INFECTION IN A SCHOOL POPULATION: LABORATORY METHODOLOGY \* ‡

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SINCE the clinical diagnosis of streptococcal infections is necessarily presumptive, epidemiologic studies instituted to detect such infections depend upon the accuracy of laboratory methods used for the isolation of beta-hemolytic streptococci. In this paper the results of comparative studies of various laboratory technics used in culturing and identifying beta-hemolytic streptococci from the throat swabs of Philadelphia school children will be reported. The data were compiled during an epidemiologic study of streptococcal infection conducted since 1955, and described in an accompanying paper.<sup>1</sup> These technics vary in some details from those recommended in a statement of the American Heart Association,<sup>2</sup> and therefore they will be discussed at length. In addition, preliminary serologic data (antistreptolysin-O titrations) in a small group of children will be presented.

### METHODS

Each throat swab, immediately after being taken by the technician, was placed in a 16 by 150 mm. screw cap tube containing 2.0 ml. of sterile tryptose phosphate broth (Difco) (pH 7.4) or an enrichment broth, so that the cotton part of the swab was entirely immersed in the broth. Swabs were sterile, six inch long cotton-tipped wooden applicators (Johnson & Johnson). After the swab had been placed in the tube the upper part of the applicator, in contact with the technician's fingers, was broken off, the screw cap was replaced and the tube labeled with the child's code number. The broth tubes containing the swabs were carried in an upright position in racks to the laboratory where, when no enrichment method was used, they were processed within four hours of the original swabbing.

1. *Direct Streaking and/or Enrichment in Pike's Broth:* During the first year of the study (November, 1955, through June, 1956), throat swabs

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taken to determine carrier rates were collected in 2.0 ml. of Pike's broth<sup>3</sup> in screw cap tubes and incubated at 37° C. for 24 hours, and a loopful of the broth was then streaked on the surface of a neopeptone (Difco) infusion agar plate enriched with 4% defibrinated horse blood. The plate was incubated for 20 hours before being read. The same procedure was applied to the throat swabs obtained from home contacts of the children with positive cultures. The formula for Pike's broth was as follows: To 2 ml. of Difco heart infusion broth previously sterilized by autoclaving, 0.1 ml. of a 1:25,000 solution of crystal violet in saline, 0.1 ml. of a 1:800 solution of sodium azide in saline and 0.1 ml. of defibrinated sterile sheep blood were added aseptically. The crystal violet and sodium azide stock solutions were sterilized separately prior to use by autoclaving them at 15 pounds pressure for 15 minutes. Final pH of Pike's broth was 7.6.

Throat swabs from symptomatic children were obtained in duplicate. One swab was immersed in a screw cap tube containing 2.0 ml. of Pike's broth, as above; the other swab was immersed in a tube containing 2.0 ml. of tryptose phosphate broth (Difco). The Pike's broth tube was incubated 24 hours before streaking its content on blood agar, whereas a loopful of the tryptose phosphate broth was streaked immediately on arrival on the surface of a horse blood neopeptone agar plate. Blood plates were incubated and examined 24 hours after streaking, and a record was kept of beta-hemolytic streptococcal isolations by each method.

2. *The Poured Plate Method:* The procedure adopted from October, 1956, through June, 1957, was as follows: All throat swabs, whether from healthy or from symptomatic children, were immersed immediately in 2.0 ml. of tryptose phosphate broth (pH 7.4) contained in screw cap tubes. The swab-containing tubes were shaken vigorously on arrival in the laboratory to disperse the material collected on the swabs. A loopful of this broth was then taken with a sterile platinum-rhodium loop, calibrated to hold exactly 0.01 ml., and transferred into a 20 by 150 ml. cotton-stoppered tube containing 15.0 ml. of neopeptone infusion agar (pH 7.2-7.4) maintained in a melted state in a 45° C. water bath. To each tube of melted agar thus inoculated, 0.7 ml. of defibrinated gauze-filtered sterile sheep blood was added. Mixture was achieved by inverting the tube, and the blood agar was then poured into 100 by 10 ml. sterile plastic disposable Petri dishes (Falcon). The plates were allowed to cool and solidify and were then incubated for 20 hours at 37° C. The plates were read by holding them up to the light and examining them for deep and surface colonies surrounded by a zone of beta-hemolysis.

### 3. *Comparative Studies:*

(a) Comparison of the direct streaking method with Pike's broth enrichment method: throat swabs from symptomatic children were obtained in duplicate in 1955-56 and processed by each method.



(b) Comparison of the poured-plate method with the enrichment method (using Pike's broth): in experiments conducted in May, 1957, and October, 1957, duplicate throat swabs were obtained from well children in the school where the carrier rate had been found to be high and where no systematic penicillin treatment had been instituted. One swab was processed by the poured-plate method described above, and the other was enriched for 24 hours in Pike's broth and then a loopful of the broth was streaked on a sheep blood neopeptone agar plate.

(c) Comparison of the poured-plate method with an enrichment method using a commercially available selective enrichment broth named Streptosel (Baltimore Biological Laboratories): in the Fall of 1957 duplicate throat swabs were obtained from well children in the school where the carrier rate had been found to be high. One swab was processed by the poured-plate method described above, the other one was incubated in Streptosel broth 24 hours and then a loopful of the broth was streaked on a neopeptone sheep blood agar plate. In one series of comparative experiments, Streptosel which had been sterilized by autoclaving at 15 pounds pressure for 15 minutes was used; in another series, Streptosel which had not been autoclaved; in another series, autoclaved Streptosel to which sheep blood had been added (0.2 ml. defibrinated blood per 2.0 ml. of medium); and finally, in one series, Streptosel which had been prepared and tubed for the study by the manufacturer.

Streptosel medium, like Pike's broth, contains crystal violet and sodium azide as selective inhibitors (though at slightly different concentrations), and is said to support the growth of beta-streptococci without added blood, because of the presence in it of trypticase and phytone.

4. *Colony Counts*: During 1956-57 a record was kept of the relative number of beta-hemolytic streptococci found in cultures, made by the poured-plate technic. The cultures were graded as follows:

- 1 plus: If there was one colony of beta-hemolytic streptococci for each 100 or more colonies of other microorganisms.
- 2 plus: If there was one colony of beta-hemolytic streptococci per 50 to 100 colonies of other microorganisms.
- 3 plus: If there was one colony of beta-hemolytic streptococci per 20 to 50 of other microorganisms.
- 4 plus: If there was one colony of beta-hemolytic streptococci per 5 to 20 colonies of other microorganisms.
- 5 plus: When a pure or almost pure culture of beta-hemolytic streptococci was obtained.

5. *Serologic Grouping and Typing*: Colonies of beta-hemolytic streptococci were fished from the original blood agar plates and streaked on fresh blood agar plates. When isolation in pure culture was achieved, the microorganisms were grown for 24 hours, or more if necessary, in Todd-Hewitt broth (Difco), from which acid extracts were prepared. Grouping was



performed by the capillary tube method of Lancefield,<sup>4</sup> and typing by the microprecipitin method described by Swift et al.<sup>5</sup> During the first year of the study, both grouping and typing sera were obtained from the Diagnostic Reagents Unit of the Communicable Disease Center in Chamblee, Georgia. During the second year, the grouping sera were purchased from Difco, Detroit, Michigan. Grouping sera included group A, B, C and G antisera; type-specific sera included types 1, 2, 3, 4, 5, 6, 8, 11, 12, 13, 14, 15, 17, 18, 19, 22, 23, 24, 25, 26, 28, 29, 30, 31, 32, 33, 36, 37, 38, 39, 40, 41, 42, 43, 44, 46 and 47. Underlined are the serologic types most frequently encountered throughout the present study. Specific sera against those nine types were used first in a screening battery to type the extracts obtained. If no typing was thus obtained, all the other typing antisera were used.

6. *Antistreptolysin-O Titrations*: Titrations of antistreptolysin-O antibody were performed using the method of Rantz and Randall.<sup>6</sup> Paired sera from the same individual were always tested on the same day with the same reagent so that differences in titer between the two could be considered significant. Prior to the performance of the tests the sera were kept frozen at minus 20° C. In a few instances, washed human erythrocytes were used instead of rabbit erythrocytes, but the results were comparable. In all the antistreptolysin-O titrations a sample of serum of known antistreptolysin-O titer was included as a control.

During the year 1955-56 in school W, in which no systematic treatment with penicillin had been instituted, sera were obtained from 72 children with negative cultures throughout the school year. In the same school, paired sera from 45 healthy carriers of group A beta-hemolytic streptococci were obtained. The first blood sera were obtained within one to five days after the routine throat swabs had been found positive for beta-hemolytic streptococci, and the second specimen one month later. Since routine cultures were obtained monthly, a maximum of 36 days might elapse from the onset of the carrier stage (without clinical manifestations) to the time a blood specimen was obtained.

## RESULTS

1. *Comparative Studies on Culture Methods*: (a) Pike's broth versus direct streaking method: From a total of 1,046 duplicate throat swabs from symptomatic children, 87 isolations were made which were later confirmed by serologic grouping. Positive cultures which could not be grouped serologically are not included in the tabulation. In 44 cases out of 87, beta-hemolytic streptococci were found by both methods; in 34 cases the streptococci could be isolated only after enrichment in Pike's broth; in nine cases only the direct streaking method led to isolation of streptococci, whereas the Pike's broth was negative. The serologic groups were represented as follows: 78 group A isolations, of which 41 (52.6%) were possible by both methods, 28 (35.8%) after Pike's broth enrichment only, and nine (11.6%)

after direct streaking only; three group B isolations, all after Pike's broth enrichment only; four group C isolations, of which two were secured by both methods and two after enrichment only; two group G isolations, of which one was by both methods and one after enrichment only.

(b) Poured-plate method versus enrichment in Pike's broth: The results are summarized in table 1. The data have been compiled from two experi-

TABLE 1  
Poured-Plate Method Versus Pike's Broth Enrichment

	Total Isolations	Group A	Group B	Group C	Group G	Non-groupable*
Cultures positive for beta-hemolytic strep. by both methods	50	41	2	3	3	1
Cultures positive after Pike's broth enrichment only	9	7	1	1	—	—
Cultures positive by the poured-plate method only	46	37	4	1	2	2
Total:	105	85	7	5	5	3

\* Including possible group F.

ments in which a total of 399 throat swabs were obtained in duplicate from well children. They indicate that 43.2% of the total hemolytic streptococcal isolations (43.5% of the total group A isolations) would have been missed if the Pike's broth enrichment method had been used exclusively. On the other hand, only 8.6% of the total hemolytic streptococcal isolations (8.2%

TABLE 2  
Poured-Plate Method Versus Streptosel Broth Enrichment

	Total Isolations	Group A	Group B	Group C	Group G	Non-groupable*
Swabs positive by both methods	21	13	2	—	4	2
Swabs positive after enrichment in Streptosel broth only	27	7	—	—	4	16
Swabs positive by the poured-plate method only	168	140	5	9	7	7
Total:	216	160	7	9	15	25

\* Including possible group F.

of the total group A isolations) would have been missed if the poured-plate method had been used exclusively.

(c) Poured-plate method versus enrichment in Streptosel: Since variations in Streptosel preparations did not significantly alter the results, they are compiled in one table (table 2). If the Streptosel enrichment method had been used exclusively, 77.7% of the total hemolytic streptococcal isolations (87.5% of the group A isolations) would have been missed, whereas a

negligible 4.3% of the group A isolations would have been missed if the poured-plate method had been used exclusively. However, enrichment of the swabs in Streptosel broth seemed to give a slightly higher yield of non-groupable beta-hemolytic streptococci which were of secondary concern in the current study.

TABLE 3  
Streptococcal Colony Counts in Carriers and Ill Children

School	Total Group A Positive Cultures from Carriers	Per Cent of Cultures by Category					Total Group A Cultures from Symptomatic Children	Per Cent of Cultures by Category				
		1+	2+	3+	4+	5+		1+	2+	3+	4+	5+
G	109	49	18	12	7	14	32	31	19	6	10	34
B	287	57	17	14	7	5	100	46	8	6	16	24
W	746	58	19	11	7	5	106	37	18	7	16	22

2. *Streptococcal Colony Counts:* Colony counts on cultures obtained from ill children and carriers are summarized in table 3. Only those cultures yielding group A streptococci are included in the table. In schools B and W about 40% of the throat cultures from symptomatic children received a 4 plus or 5 plus grade, while approximately 12% of the cultures from carriers were as rich in beta-hemolytic streptococci. In school G the difference was less marked: 21% of the carrier cultures were graded 4 plus or 5 plus, as compared to 43.7% of the cultures from symptomatic children.

TABLE 4  
Frequency Distribution of Antistreptolysin-O Antibody Titers in Sera from Noncarriers and from Healthy Carriers, Group A Streptococci, 1955-56

A.S.O. Titer	<12	12	50	100	125	166	250	333	500	625	833	1,250 and Higher	Total Sera Tested
Noncarriers	4	9	8	4	8	7	6	7	4	5	4	6	72
Group A streptococci carriers	0	3	2	0	3	5	9	4	7	7	1	4	45

These data tend to indicate that cultures from symptomatic children contained large numbers of streptococci more frequently than did the cultures from carriers.

3. *Antistreptolysin-O Antibody Titrations:* The frequency distribution of the various antistreptolysin-O antibody titers obtained from two groups of children in school W (noncarriers and healthy group A streptococcal carriers) is depicted in table 4. Forty noncarriers (55.6% of this group) had an antistreptolysin-O titer equal to or less than 166 Todd units, com-

pared to only 13 (28.9%) of the 45 group A carriers. Thirty-two of 45 carriers (71.1% of this group) had a titer above 166 Todd units, compared to 32 of 72 (44.4%) in the noncarrier group. (Chi-square significance at 1% level, determined by using an antistreptolysin index<sup>7</sup>).

From 36 of the 45 group A hemolytic streptococcus carriers whose antistreptolysin-O antibody titers are summarized in table 4, a second serum sample was obtained one month after the first. In nine children (25%) the antistreptolysin-O titer had remained stationary, of whom three were still group A carriers at the time the second blood specimen was obtained. In eight individuals (22%), the antistreptolysin-O titer had risen, although only slightly in most cases. Three of these children were still group A carriers at the time of the second bleeding. In 19 individuals (53%) the antistreptolysin-O titer had dropped to a lower value, although eight of these children were still group A carriers at the time the second sera were obtained. Thus the evolution of the antistreptolysin-O titer did not correlate significantly with the continuation or spontaneous disappearance of the carrier state.

#### DISCUSSION

*A. Isolation Methods:* The technic endorsed by the American Heart Association for culturing beta-hemolytic streptococci from the throat<sup>2</sup> consists of inoculation of the swab on a moist sheep blood agar plate and subsequently streaking the primary inoculum onto the remainder of the plate. A few stabs are made with the loop into the agar, for observation of sub-surface hemolysis. After incubation over night at 37° C. the plates are examined for typical colonies. Final diagnosis is made by isolation in pure culture of the suspicious colonies, staining the microorganisms thus obtained in pure culture with Gram stain and, eventually, by serologic grouping.

Although this procedure is certainly adequate whenever the throat swabs can be processed immediately after being taken, it cannot be relied upon in situations where a great many throat swabs have to be carried from the place of collection (school or home) to the laboratory and when several hours may elapse until the specimen is put into culture. Drying of the swabs, under such conditions, results in inactivation of the streptococci. Furthermore, when throat swabs are obtained from healthy individuals in an attempt to detect streptococcal carriers, the yield of recognizable streptococcal colonies may not be sufficient by this method, and a considerable proportion of positive cultures may be missed. It has been convincingly shown<sup>8</sup> that the bacterial content of a throat swab can be determined better by preparing a broth suspension of the swab than by direct streaking of the swab onto a blood agar plate, even in conditions in which the swab was not allowed to dry.

During the first year of the study reported here (1955-56), evaluation was undertaken of enrichment procedures designed to increase selectively



the number of beta-hemolytic streptococci isolated from throat cultures. Several such enrichment media have been described. Pike<sup>8</sup> reported the use of a beef heart infusion broth medium in which sodium azide and crystal violet act as selective inhibitors of organisms other than beta-hemolytic streptococci. From 131 throat swabs from well children, which had been enriched by this method, Pike<sup>9</sup> isolated beta-hemolytic streptococci in 51 instances, as compared with only 16 when duplicate swabs were directly streaked onto blood agar plates. The advantages of the Pike's enrichment medium were confirmed by the Commission on Acute Respiratory Diseases.<sup>8</sup> However, the gain of positive cultures when using the enrichment method was greatest for group B streptococci and least for the typable strains of group A. In a more extensive study, by Feldman and Harmon,<sup>10</sup> 4,176 throat swabs obtained in a hospital for rheumatic diseases were analyzed for the presence of beta-hemolytic streptococci by direct streaking on blood agar and after enrichment in Pike's broth. The enrichment medium was most useful in the demonstration of groups B, F and G but, as employed, it increased only slightly the rate of group A isolations.

In the current study the comparative results on cultures from symptomatic children between direct streaking on the surface of a blood agar plate and enrichment in Pike's broth also showed the superiority of the enrichment method over simple streaking, with the greatest gain in group B streptococcal isolations.

On the other hand, the use of the commercially available Streptocel enrichment broth has proved to be wholly unsatisfactory.

During the 1955-56 year, when surface streaking was used exclusively, either directly, or after enrichment, colonies had often been noted with minimal zones of beta-hemolysis which, if not numerous, were easily missed. Since it is known that beta-hemolysis is often more pronounced in conditions of semi-anaerobiosis, such as prevail in the depths of an agar plate,<sup>11</sup> a method was used during the second year of the study for culturing the swabs from symptomatic children and from well children in which the colonies of beta-hemolytic streptococci, whenever present, could be seen in the depths of the blood agar plate as well as on its surface. It is apparent from the data presented that this poured-plate method has permitted a significantly higher recovery rate of beta-hemolytic streptococci, especially of group A streptococci, than has any enrichment method tried or than the surface streaking method. Furthermore, when the poured-plate method was used, the results were known within 24 hours instead of 48 hours, as when enrichment methods were employed.

Other hemolytic organisms, such as some staphylococci, are much easier to distinguish from beta-streptococci when growing in the depth of a blood agar plate than on its surface. Instead of the sharply delineated zone of hemolysis produced by the beta-streptococci, the staphylococci cause a fuzzy zone of hemolysis. Alpha-streptococci, which may occasionally cause con-



fusion when growing on the surface, create no such problem with the poured-plate method. The only confusing organisms remain *Hemophilus hemolyticus*, which were found frequently when horse blood agar was used. This difficulty was eliminated when, in the poured-plate method, sheep blood was used, thereby inhibiting the growth of *H. hemolyticus*, as shown by Krumwiede and Kuttner.<sup>12</sup>

Of secondary importance is the fact that the amount of media and glassware as well as labor required was less with the poured-plate method than with the enrichment method.

Another advantage of the poured-plate method is that it permitted evaluation of the proportion of beta-hemolytic streptococci in the bacterial flora collected on the throat swab, because a calibrated loopful of the swab suspension was used to seed the melted blood agar and because the various colonies were dispersed homogeneously in the depth and on the surface of the blood agar plates and could be counted with relative ease. Such an evaluation is much more difficult and less reliable when the swab is streaked directly on the surface of a blood agar plate, and it is obviously impossible when enrichment methods are used. The data compiled on grading of cultures would seem to indicate that cultures from symptomatic children more frequently contained large numbers of streptococci than did cultures from carriers. Concerning the considerable proportion of cultures from symptomatic children which contained only small numbers of streptococci, one may speculate that, in many of these, streptococci were passively present and not etiologically associated with the current illness. In a recent report from the Streptococcal Disease Laboratory at the Francis Warren Air Force Base in Wyoming,<sup>13</sup> it was observed that throat cultures containing large numbers of streptococci are associated with acute or recent infection, and that the numbers of streptococci recovered decrease over a period of weeks or months. While these numerical observations may be of help in providing a basis for the laboratory diagnosis of streptococcal infection versus streptococcal carrier, it is realized that widely different counts might be obtained if several throat swabs were taken from the same child and cultured separately.

The over-all superiority of the poured-plate method for the isolation of beta-hemolytic streptococci from throat swabs has been recently recognized by Schaub et al.,<sup>14</sup> who had with it the largest yield of positive isolations of any single method. These authors, on the other hand, obtained better results than we did when using the Streptosel enrichment broth, although this method was still, in their hands, inferior to the poured-plate technic.

**B. Serologic Methods:** Since the discovery by Todd in 1932<sup>15</sup> of antibodies in human sera against streptolysin-O as a result of infection with beta-hemolytic streptococci, the determination of the titer of these antibodies in paired sera has been widely used as the most reliable evidence for bona fide streptococcal infection.<sup>16, 17, 18, 19</sup>

Relatively little attention has been paid to the behavior of antistreptolysin-O antibodies in the streptococcal carrier state, since it is difficult to determine precisely when the carrier state actually began in a given individual. Studies of Army groups by Lemon and Hamburger<sup>20</sup> have, however, established that significantly higher antistreptolysin-O titers were found in the sera of nasal streptococcal carriers than in those of comparable individuals with negative cultures.

In the present study the opportunity existed of extending these observations to younger age groups, inasmuch as the practice of routine monthly throat culture made possible a relatively accurate recording of the time when an individual became a carrier. In general, the data seem to support the hypothesis that, in many instances, the carrier state in the children was the result of a subclinical streptococcal infection which did elicit a demonstrable antibody response. Comparable figures have been reported by Streitfeld et al.<sup>7</sup> and Packer et al.<sup>21</sup> The latter group showed that significant increases in antistreptolysin-O titers were more frequently preceded by overt upper respiratory illness in the younger age group (under six years), than in the older age group (six to 10 years), in which subclinical infection seemed to be more frequent.

On the other hand, our findings tend to indicate that the evolution of the antistreptolysin-O antibody titer did not correlate significantly with the continuation of spontaneous disappearance of the carrier state over a period of one month. Eventually it was noted that some children in the noncarrier group had an increase in antistreptolysin-O antibody titer which may in fact have been due to a streptococcal carrier state of a short duration, missed by the monthly routine throat swabbing. A similar observation has been made by Packer et al.,<sup>21</sup> who suggested that the antistreptolysin-O titer determination might be a more sensitive test than a throat culture in identifying an inapparent streptococcal infection.

#### SUMMARY AND CONCLUSIONS

The bacteriologic methods used for isolation of beta-hemolytic streptococci in an epidemiologic study of streptococcal infection in a school population have been described:

1. Comparative data using various laboratory technics indicate that:
  - (a) The poured-plate method resulted in a higher yield of beta-hemolytic streptococci than did any enrichment method tried, and greater than a surface streaking method.
  - (b) Enrichment of swabs in Pike's broth increased the yield of beta-hemolytic streptococci over simple streaking on a blood agar plate. The greatest gain was in isolations of group B beta-hemolytic streptococci.
  - (c) A commercially available enrichment broth was found to be unsatisfactory as a culture medium.

2. Grading of cultures by colony counts indicated that cultures from symptomatic children in general contained larger numbers of streptococci than did those from carriers. However, a considerable proportion of cultures from symptomatic children contained only small numbers of streptococci.

3. A significant difference was noted in antistreptolysin-O response between carriers and noncarriers.

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#### SUMMARY IN INTERLINGUA

Proque le diagnose clinic de infection streptococcal es un diagnose de presumption, studios epidemiologic visante a deteger tal infectiones depende del accuracia del methodos laboratorial usate in le isolation de streptococcus hemolytic beta.

In iste articulo, datos comparative es presentate con respecto al methodos laboratorial usate in un studio de infectiones streptococcal in scholares in Philadelphia. Esseva trovate (1) que le methodo cultural a infusion in plattas resultava in significativamente plus alte rendimentos de streptococcus hemolytic beta que le varie methodos de inricchimento tentate e etiam que le methodo a frottis superficial, (2) que le inricchimento del tampons in bouillon de Pike augmentava le rendimento de streptococcus hemolytic beta in comparison con un simple frottis sur un platta de agar a sanguine, specialmente in isolationes de grupo B, e (3) que un commercialmente disponibile bouillon de inricchimento (continente chloruro de methylosanilina e azido de natrium como inhibitores selective de altere organismos e trypticase e phytona como promotores del crescentia de streptococcus) non esseva satisfacente como medio de cultura.

Le classage del culturas secundo lor numeros de colonias indicava que, in general, culturas ab subjectos symptomatic contineva plus grande numeros de streptococcus que culturas ab portatores. Tamen, un considerabile proportion de culturas ab subjectos symptomatic contineva solmente micre numeros de streptococcus.

Un differentia significative inter le portatores e le non-portatores esseva notate in los responsa a antistreptolysina O.

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## THE XYLOSE TOLERANCE TEST AS A MEASURE OF THE INTESTINAL ABSORPTION OF CARBOHYDRATE IN SPRUE.\*†

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METABOLIC balance studies and the more recent radioactive isotopic tracer technics provide reasonably accurate methods for measuring the intestinal absorption of fat,<sup>1, 2, 3, 4</sup> nitrogenous materials,<sup>1, 2</sup> water<sup>5, 6</sup> and electrolytes.<sup>2, 7, 8, 9, 10, 11, 12, 13</sup> However, the available methods for the measurement of carbohydrate absorption have certain disadvantages. For example, the oral glucose tolerance test has been criticized because the blood levels obtained reflect many metabolic processes and not simply intestinal absorption.<sup>3, 8</sup> In the second method, in which carbohydrate absorption is measured directly, the small bowel is intubated during repeated fluoroscopic examinations and its lumen is obstructed. The test substance in known concentration is introduced into the bowel proximal to the obstruction. Intestinal absorption is assessed by withdrawal of the bowel contents after a standard period of time and by estimation of the new concentration of the test substance remaining. In this technic the radiation hazard and the discomfort to the patient are serious drawbacks.<sup>14, 15, 16</sup>

Clearly, there is need for a simple clinical test of the intestinal absorption of carbohydrate which can be performed repeatedly. In an oral tolerance test this could be achieved by using a nonmetabolized substance having an intestinal absorptive rate similar to that of glucose and a constant rate of excretion from the body.

Dextroxylose, a pentose sugar, has been proposed as an alternative to glucose. Earlier investigation of this substance suggested that it was poorly absorbed, after oral administration, in various states of intestinal malabsorption.<sup>17, 18</sup> More recently (1950) Turner<sup>19 a, b</sup> studied its behavior in 12 normal individuals from whom he derived a normal response to a xylose tolerance test. Using an oral dose of 25 gm. of d-xylose, he noted that the blood curve, which began with a fasting level of zero, reached a mean peak of 45 mg. % at one hour and then fell gradually toward the fasting level by the fifth hour. An average of 6 gm. of xylose was excreted in the urine during the five-hour period. There was a concomitant fall in plasma inorganic phosphate, which suggested to the author that d-xylose was phos-

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phorylated during absorption. In addition, blood xylose curves were found to be more reproducible than blood glucose curves when done repeatedly in the same individuals.<sup>19 a</sup> Turner suggested that d-xylose fulfilled all of Althausen's criteria<sup>20</sup> for the ideal test substance for the indirect measurement of intestinal absorption: it is water-soluble, it is probably phosphorylated during absorption, it is absorbed from the gut at a rate equal to that of glucose in the cat, it is thought not to undergo transformation or metabolism during passage through the liver,<sup>21</sup> and it is not normally found in blood or urine.

The present paper is concerned with the investigation of the oral d-xylose tolerance test in conjunction with other tests of intestinal absorption during a long-term study of the effects of various treatments on the malabsorption syndrome. Our observations concerning the effects of therapy have already been reported.<sup>22</sup> In the present study the xylose tolerance test was examined in the following groups of individuals:

A. Normal controls:

1. Normal subjects.
2. Patients with apparently normal gastrointestinal function receiving cortisone by mouth.

B. Patients having diarrhea without steatorrhea.

C. Patients with the malabsorption syndrome:

1. Adult patients having nontropical sprue.
2. Patients having steatorrhea of the secondary variety.

## METHODS AND MATERIALS

### I. The d-Xylose Tolerance Test:

Twenty-five grams of d-xylose dissolved in 500 ml. of water were administered by mouth to the fasting subject immediately after an initial blood sample had been obtained. The blood xylose level was then determined at hourly intervals for five hours and the renal excretion measured for the total five-hour period. Xylose levels were determined by Turner's modification of the method of Roe and Rice,<sup>23</sup> which measures pentose concentration but is not specific for xylose alone. All individuals were confined to bed during the test. With this exception, the test was performed according to Turner's specifications.

### II. Subjects of Study:

A. Normal individuals

The normal group was composed of 25 individuals in whom there was no clinical evidence of diabetes mellitus or gastrointestinal, renal or hepatic disease, any of which might possibly have influenced the response to the test.

Eleven of these (hospital confrères varying in age from 20 to 44) were studied in order to define the normal response to the test.

Another group of eight subjects included patients in an older age group (45 to 85 years of age), each of whom had some illness (pulmonary fibrosis, hyperlipemia, rheumatoid arthritis, lymphosarcoma, chronic lymphatic leukemia, Hodgkin's disease, neurodermatitis or cerebrovascular accident) for which cortisone treatment had been planned. These individuals were tested before treatment, and again after cortisone had been given for from 10 to 14 days. Each subject received 125 mg. of cortisone daily by mouth in five divided doses. The remaining six subjects, selected in a similar manner, were given cortisone by mouth in the same dosage for a shorter period (three days), and the test response was compared before and after treatment.

#### *B. Patients having diarrhea without steatorrhea*

The test was also performed on 15 individuals suffering from diarrhea of varying etiology. The absence of steatorrhea was proved in nine of these subjects by fat balances. Fat balances were not performed in the remaining six patients because neither the clinical history nor the course of the illness suggested intestinal malabsorption.

#### *C. Patients having steatorrhea*

Steatorrhea was established in each of the 33 patients in the group by fat balances. Dietary fat intake varied from 80 to 130 gm. per day, and the over-all fecal fat excretion ranged from 11.2 to 84.5% of the daily fat intake.

1. *Idiopathic sprue*, diagnosed on the basis of the clinical history and by exclusion of other diseases which might account for the syndrome, was present in 14 patients. In two of these the diagnosis was based chiefly on failure to discover an underlying cause for malabsorption, since the clinical syndrome was atypical in both.

2. *Secondary steatorrhea*, diagnosed on the basis of a recognizable underlying disease which appeared to be responsible for intestinal malabsorption, was present in 19 patients. These conditions included gastrointestinal disease or operation on the gastrointestinal tract in 11, Whipple's disease in two, pancreatic insufficiency in two, hepatic disease and duodenal diverticula in one, and steatorrhea associated with diabetic neuropathy and diarrhea in three.

Xylose tests were performed before treatment in all but five of the two groups of patients. Any changes occurring in the test during treatment were compared with these initial responses. In the idiopathic sprue group, 15 such comparisons during therapy were made. Similar comparisons were possible in only five patients in the secondary steatorrhea group because of such factors as the lack of a pretreatment test, failure to obtain tests during treatment, or the performance of tests at a time during treatment too early to assess response. Instead, these test responses are included in table 4 with other pertinent data.

In different patients, treatment consisted of cortisone or the gluten-free

TABLE 1  
Response to the Oral Xylose Tolerance Test in 11 Normal Subjects

Blood Xylose	Mean	Standard Error
One hour	38.8 mg. %	$\pm 2.4$ mg. %
Two hours	44.9 mg. %	$\pm 1.8$ mg. %
Three hours	30.3 mg. %	$\pm 1.6$ mg. %
Four hours	19.9 mg. %	$\pm 1.2$ mg. %
Five hours	11.9 mg. %	$\pm 0.8$ mg. %
Urine Xylose		
Five-hour excretion	8.46 gm.	$\pm 0.47$ gm.

diet, or a combination of cortisone and diet. Cortisone was administered by mouth in an initial dose of 125 mg. daily in five divided doses. When treatment was prolonged this dose was gradually reduced to 50 and even to 25 mg. daily. To ensure that the diets employed were gluten-free, special precautions were taken to exclude not only the cereal grains but also the hidden sources of gluten in commercial food products. During combined therapy the patient received 25 mg. of cortisone by mouth daily in addition to the gluten-free diet. Twenty-five courses of treatment were administered: 12 patients received cortisone, 10 received the gluten-free diet, and three were given combined therapy.

### III. Results:

#### A. Normal subjects

1. The results of the oral xylose tolerance test obtained in 11 normal subjects ranging from 20 to 44 years of age are shown in table 1 and figure 1.

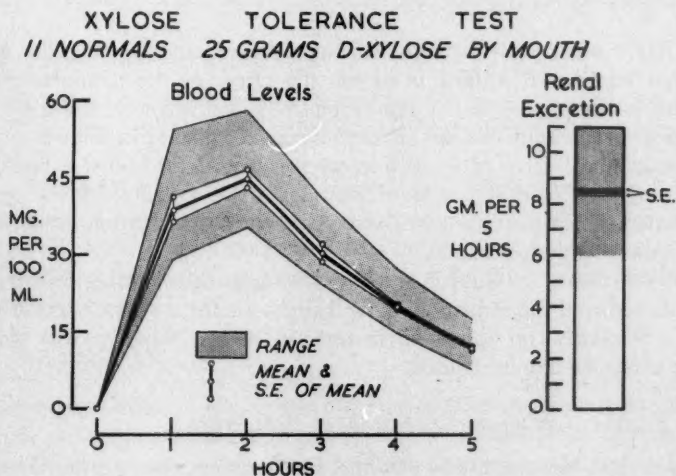


FIG. 1.

In figure 1, the mean blood xylose curve is represented as a heavy line connecting mean blood levels at hourly intervals. The mean renal xylose excretion is shown as a heavy line in the column on the right. Above and below the mean blood levels, standard error is represented by the clear zone and range by the stippled zone. Measurable fasting blood levels of xylose were noted in only two individuals, and these were 1.6 and 3.2 mg.%, respectively.

These data differ from those of Turner in only two respects: a higher mean renal xylose excretion occurred in our subjects, and the highest blood level was noted at the second hour instead of at the first.

In the remainder of this paper the mean blood and urine values noted above are used for comparison with test responses obtained in the various patients studied.

TABLE 2  
The Effect of Oral Cortisone on the Xylose Test in 8 Normal Subjects

Blood Xylose	Before Cortisone		During Cortisone	
	Mean	Standard Error	Mean	Standard Error
Fasting	0.9 mg. %	+/-0.6 mg. %	0.05 mg. %	+/-0.05 mg. %
One hour	43.8 mg. %	+/-3.9 mg. %	45.8 mg. %	+/-4.6 mg. %
Two hours	43.5 mg. %	+/-3.8 mg. %	45.6 mg. %	+/-3.6 mg. %
Three hours	35.3 mg. %	+/-2.5 mg. %	38.3 mg. %	+/-2.6 mg. %
Four hours	28.3 mg. %	+/-1.8 mg. %	30.4 mg. %	+/-1.5 mg. %
Five hours	22.4 mg. %	+/-2.2 mg. %	22.8 mg. %	+/-1.6 mg. %
Urine Xylose				
Five-hour excretion	4.3 gm.	+/-0.7 gm.	5.4 gm.	+/-0.9 gm.

2. Eight older patients with various diseases not affecting the gastrointestinal tract were studied to assess the effect of the administration of cortisone on the xylose test. The results obtained before and during 10 to 14 days of oral administration of cortisone are compared in table 2.

The standard error of the difference for any of the above values before and during cortisone is not significant ( $p = 0.2$  to  $0.9$ ). It is apparent that cortisone administration was associated with no alteration in the normal test response in these patients.

The remaining six subjects, selected because of normal gastrointestinal function, received the same dose of oral cortisone for a shorter period (three days). Similarly, no alteration in the xylose test response was observed during cortisone administration.

#### B. Patients having diarrhea without steatorrhea

The xylose tolerance tests obtained in 15 patients having diarrhea without steatorrhea are shown in table 3. Fecal fat excretion is included for the



nine patients on whom this determination was made. When the mean blood and urine xylose levels obtained in this group of patients are compared with the normal mean values, some discrepancies exist. However, these do not consist of a lowering of blood xylose levels, which might be expected if simple diarrhea interfered with xylose absorption. On the contrary, some of the blood levels fall above the previously established normal range.

TABLE 3  
The Xylose Test in 15 Patients Having Diarrhea without Steatorrhea

Subject	Fecal Fat Excretion (% of Intake)	Blood Xylose (mg.%)						
		Fasting	1-hour	2-hour	3-hour	4-hour	5-hour	5-hour Urine Excretion Xylose (gm.)
Ba.	3.5%	0	52.0	66.0	63.0	36.0	26.0	5.1
St.	0.5%	0	60.0	80.0	44.0	28.0	20.0	6.2
Ca.	2.5%	0	36.0	52.0	40.0	26.0	18.0	6.5
Gr.	3.7%	0	42.6	37.4	22.6	16.1	11.6	4.8
Mo.	4.0%	0	29.7	43.2	25.9	17.3	11.9	6.5
Br.	5.8%	0	35.9	40.0	28.0	20.0	12.0	7.9
Cap.	1.7%	3.7	35.6	35.6	31.0	31.0	20.0	5.6
Au.	1.5%	0	67.6	69.0	51.5	33.0	21.4	8.0
Pe.	2.2%	0	43.6	45.9	23.5	18.8	11.8	8.0
Ya.	—	0	47.4	48.5	39.0	23.6	13.1	8.1
Sh.	—	0	44.9	36.5	30.0	23.4	18.1	5.3
Gre.	—	0	61.0	55.5	41.6	30.8	22.2	5.0
DeA.	—	0	48.4	33.2	20.8	10.0	7.5	3.2
He.	—	0	65.5	58.0	39.0	27.8	22.6	5.2
Mean Standard error		0.24 +/- .25	46.8 +/- 3.2	49.4 +/- 3.6	35.9 +/- 3.0	25.2 +/- 1.9	17.9 +/- 1.7	6.0 +/- 0.39

### C. Patients having steatorrhea

The responses to the oral xylose tolerance test given by our patients with idiopathic sprue and secondary steatorrhea before and during treatment are listed in table 4.

Good clinical responses to treatment were characterized by such findings as cessation of diarrhea, freedom from flatulence, and improvement in appetite and strength, and by correction of abnormalities in serum electrolytes, serum calcium, prothrombin time, serum proteins and in the intestinal absorption of fat.

#### 1. Idiopathic sprue

*Before treatment.* The xylose test was studied in 14 patients on 16 occasions. Abnormally flat blood xylose curves and low levels of renal xylose excretion were present in 14 instances. The response to the test was normal in two patients. This was expected in one, whose illness was in spontaneous



TABLE 4

Case	Treatment and Duration (in days)			Xylose Tolerance Test (blood xylose levels mg./100 ml.)						Five-Hour Renal Xylose Excretion (grams)	Fecal Fat Excretion (% of fat intake)
	Nil	Gluten-free Diet	Corti- sone	Fasting	One Hour	Two Hours	Three Hours	Four Hours	Five Hours		
Normal Mean:				0	38.8	44.9	30.3	19.9	11.9	8.46	
Idiopathic Sprue:											
1.	X	—	—	4.3	5.5	8.6	17.0	20.1	17.8	0.2	40.2
	—	—	7	4.4	13.1	22.0	20.2	15.0	12.2	0.1	6.8
	—	—	14	4.7	14.1	24.7	29.8	26.7	13.8	3.9	27.2
2.	X	—	—	0	9.7	23.2	23.7	15.8	11.4	3.1	63.0
	—	—	6	12.5	23.0	31.9	23.8	18.6	14.1	4.3	10.1
3.	X	—	—	0	11.2	22.4	19.4	15.6	13.2	0.5	14.3
	—	—	60	2.0	25.4	22.2	19.3	10.8	8.9	3.5	18.7
4.	X	—	—	—	—	—	—	—	—	—	18.0
	—	—	11	2.1	48.3	42.8	45.8	34.5	27.7	5.6	8.0
5.	X	—	—	0	0	8.0	8.0	6.4	4.8	1.4	30.5
6.	X	—	—	0	0	0	0	0	0	0.3	54.0
	—	—	14	2.3	11.0	19.2	21.6	19.7	20.4	0.7	48.0
	—	—	35	9.8	15.8	28.5	32.6	36.2	22.2	2.0	21.0
	—	365	820	0	35.5	37.4	35.5	27.5	21.3	7.2	36.0
	X	—	—	0	7.7	16.1	23.1	23.1	21.5	3.2	38.0
7.	X	—	—	4.1	10.2	14.4	16.4	20.5	14.9	3.3	33.0
	—	—	21	0	16.0	17.6	19.6	14.4	9.6	7.2	16.0
	—	19	60	2.1	37.8	42.7	35.3	26.4	19.4	8.0	4.6
8.	X	—	—	7.7	19.7	16.8	12.3	13.9	11.9	0.6	84.5
	—	—	6	7.4	24.0	31.2	26.0	24.0	12.6	3.5	33.3
	X	—	—	0	15.3	17.9	16.8	12.9	9.0	1.6	—
	—	30	—	0	41.0	42.6	33.6	23.6	16.8	1.8†	9.5
9.	X	—	—	0	8.8	12.4	12.1	8.4	5.7	2.0	44.6
	—	60	—	0	33.0	38.4	36.9	24.6	15.4	6.5	17.0
	X	—	—	0	7.7	11.4	13.8	10.0	10.0	1.7	28.0
	—	36	—	0	12.3	25.8	27.7	27.1	17.2	3.7	27.0
10.	X	—	—	0	19.0	22.8	17.1	11.4	7.6	2.6	37.4
	—	26	—	0	25.8	25.8	21.8	18.8	11.8	9.1	10.6
11.	X	—	—	0	6.5	8.2	11.6	12.2	8.3	0.9	32.0
	—	56	—	0	13.4	14.3	16.5	11.7	9.5	2.3	15.0
12.	X	—	—	0	41.4	38.6	30.0	22.8	15.0	0.5	16.0
	—	24	—	0	48.1	40.0	30.0	22.0	14.6	5.8	4.3
13.	X	—	—	0	41.0	54.0	36.5	31.2	32.2	6.8	3.1
14.	X	—	—	0	6.9	24.6	29.2	21.5	11.5	5.7	—*

† = inadequate collection, or loss of urine specimen.

\* = no fecal fat determination at this time.

TABLE 4—Continued

Case	Treatment and Duration (in days)			Xylose Tolerance Test (blood xylose levels mg./100 ml.)						Five-Hour Renal Xylose Excretion (grams)	Fecal Fat Excretion (% of fat intake)
	Nil	Gluten- free Diet	Corti- sone	Fasting	One Hour	Two Hours	Three Hours	Four Hours	Five Hours		
Secondary Steatorrhea: Intestinal disease or operation:											
15.	—	30	—	0	46.2	42.2	30.8	23.8	16.1	5.0	11.7
16.	X	—	—	0	41.6	44.2	33.2	25.0	18.3	6.0	24.6
17.	X	—	—	1.2	22.2	26.5	12.3	10.5	6.2	1.3	19.5
18.	—	73	109	0	44.0	48.0	35.0	20.0	17.0	4.7	19.4
19.	—	5	—	0	19.2	26.9	26.1	21.5	16.9	5.5	20.0
20.	—	8	—	0	38.9	55.5	36.6	26.1	20.0	5.2	11.2
21.	X	—	—	0	49.2	36.4	23.6	13.6	9.1	4.5	20.0
22.	X	—	—	2.4	36.8	34.0	29.2	17.0	12.4	3.2	55.0
23.	X	—	—	4.7	32.2	57.0	47.2	33.4	24.3	3.0	26.0
	—	—	24	0	21.4	40.3	30.0	23.4	14.7	5.5	12.6
24.	X	—	—	0.6	41.8	37.6	29.2	14.5	14.7	6.4	52.5
	—	—	11	4.3	25.9	27.8	21.6	19.3	16.1	4.3	12.0
25.	X	—	—	4.0	8.0	17.1	14.9	12.7	13.4	0.06	16.0
	—	—	5	1.7	21.4	33.0	29.9	24.8	13.3	2.7	18.0
	—	—	46	6.7	14.3	23.1	19.5	13.4	11.6	3.5	12.0
	—	—	62	0	15.7	28.3	21.5	17.5	21.2	4.4	5.9
	—	26	—	0	37.0	52.0	48.3	26.4	15.1	10.3	5.4
Whipple's disease:											
26.	X	—	—	5.6	47.9	27.7	28.7	24.1	15.6	2.3	5.7
27.	X	—	—	0.9	13.2	30.2	42.2	—	—	—†	26.0
	—	—	3	3.8	34.7	47.7	61.0	54.0	53.1	1.4	9.6
Pancreatic insufficiency:											
28.	X	—	—	0	72.5	53.0	49.0	27.1	12.1	7.9	24.5
29.	X	—	—	14.3	48.6	54.5	41.4	36.8	36.8	6.1	55.0
Hepatic disease and duodenal diverticula:											
30.	X	—	—	3.5	41.3	84.0	77.0	110.8	96.0	4.9	21.4
	—	—	7	5.5	61.8	69.2	52.0	36.6	50.0	—†	7.8
	—	—	240	2.4	55.7	47.5	39.7	31.9	25.5	4.1	9.8
Diabetic neuropathy and diarrhea:											
31.	X	—	—	0	42.3	32.3	24.6	13.8	12.3	3.5	13.0
32.	X	—	—	0	49.0	44.5	40.8	35.6	25.1	2.4	27.0
33.	X	—	—	7.1	19.7	25.8	31.9	30.6	31.3	4.4	18.9

† = inadequate collection, or loss of urine specimen.

• = no fecal fat determination at this time.

remission at the time. The normal response in the second patient, in the presence of definite steatorrhea, was the only example of disparity in the two parameters in this group of patients.

The effect of *cortisone therapy* was studied in seven patients. A good clinical response occurred in six, and in five patients blood and urine xylose levels tended to approach normal during treatment. In the sixth patient the test response obtained during treatment was well within the range of normal, but no initial test was carried out. Little significant clinical benefit or improvement in the xylose test was noted in the seventh patient.

TABLE 5  
Effect of Treatment on Abnormalities in the Xylose Tolerance Test in  
14 Cases of Idiopathic Sprue

		Before Treatment			During Treatment		
		Mean	Standard Error		Mean	Standard Error	
Blood							
Fasting		0.9 mg. %	+/-0.7 mg. %		2.8 mg. %	+/-1.1 mg. %	
One hour		11.8 mg. %	+/-2.8 mg. %		26.1 mg. %	+/-3.0 mg. %	
Two hours		15.1 mg. %	+/-2.7 mg. %		30.2 mg. %	+/-2.4 mg. %	
Three hours		14.8 mg. %	+/-2.2 mg. %		27.7 mg. %	+/-1.9 mg. %	
Four hours		13.2 mg. %	+/-1.9 mg. %		22.3 mg. %	+/-1.8 mg. %	
Five hours		9.9 mg. %	+/-1.4 mg. %		14.8 mg. %	+/-1.2 mg. %	
Urine							
Five-hour excretion		0.15 gm.	+/-0.5 gm.		4.9 gm.	+/-0.6 gm.	
	Fasting	1-hour	2-hour	3-hour	4-hour	5-hour	5-hour Urine
ed	1.3	4.1	3.6	2.86	2.63	1.88	0.79
"t"	1.44	3.49	4.21	4.51	3.46	2.61	6.01
P	.2-.1	.01	.01	.01	.01	.02	.01

The effect of the *gluten-free diet therapy* was studied in six patients. A good clinical response occurred in every case. The xylose test improved in four patients and was not benefited in one. In the remaining individual the initial xylose test response was normal and remained so during treatment.

The effect of *combined cortisone and gluten-free diet therapy* was studied in two patients. Decided improvement in the xylose test and a good clinical response were observed in both.

Statistical evaluation of the change observed during the treatment of 14 patients reveals that a significant difference exists between the responses obtained before treatment and those obtained during treatment. In individual patients the differences in blood and urine levels of xylose at each time interval, before and during treatment, were significant for the urine level and the one-, two-, three-, four- and five-hour blood levels (*vide infra*). The test responses before and during treatment and their statistical evaluation are shown in table 5.

## 2. Secondary steatorrhea

Before treatment, the xylose test was studied in 15 of the 19 patients. Nine of these responded to the test in a normal fashion. Flattened blood xylose curves and low levels of renal xylose excretion were present in four patients. Of these, steatorrhea was due to operation or disease involving the gastrointestinal tract in three, and to diabetic neuropathy and diarrhea in one. Abnormally high blood curves were observed in two patients, one of whom suffered pancreatic insufficiency and the other duodenal diverticula and parenchymal liver disease.

The effect of *cortisone therapy* was studied in five patients. Pretreatment xylose tests had been normal in three of these, but during therapy blood levels fell slightly in two patients (in both of whom steatorrhea was due to intestinal operation), and rose slightly in one (who suffered from Whipple's disease). In another patient (who had duodenal diverticula and liver disease), high pretreatment blood levels were reduced to the normal range during therapy. Benefit in the last patient (in whom malabsorption followed resection and plastic repair of the duodenum) resembled that noted in the patients having idiopathic sprue, and there was a rise in blood and urine xylose levels during treatment from low pretreatment values.

The effect of the *gluten-free diet therapy* was studied in one patient whose previous response to cortisone has been presented immediately above. The degree of improvement obtained by this patient while on the gluten-free diet was greater than any benefit she had derived from long-term cortisone therapy, and the xylose test became entirely normal.

## DISCUSSION

### A. Normal subjects

A reproducible response to the xylose tolerance test is obtained in normal subjects. This is demonstrated by the close similarity between the data obtained in normals by Turner and that obtained by us. The minor discrepancies are probably due to the effect of posture on the rate of gastric emptying, which is known to be slower in the supine than in the upright position. The tests in this study, performed in all instances with the subject lying in the bed, yielded a peak blood level which occurred one hour later than did that observed by Turner.

Since it is desirable to use the test to follow changes in intestinal absorption during treatment, it is essential to eliminate the possibility that cortisone may affect xylose blood levels in a manner other than by improvement of intestinal absorption. The absence of alteration of the xylose test response in eight patients having normal gastrointestinal function during therapy with cortisone is evidence that the drug exerts no effect on the intermediary metabolism of xylose. Thus, it is unlikely that spurious evidence of im-



provement will be obtained with the test. In this group of eight "sick" normals in an older age range and suffering from a variety of diseases, the mean blood curve tended to be higher and the mean renal excretion lower before treatment than in the group of 11 younger normal subjects. This difference might be attributed to a natural alteration in renal function associated with aging, or to the fact that each of these individuals was ill at the time of the test. The alterations in the test produced by variations in age are being investigated at present by the authors. The important aspect of the difference in response between the normals and the "sick" normals is that xylose levels in the latter were higher in the blood and lower in the urine, rather than low in both blood and urine, which might be expected if a defect in intestinal absorption was present.

#### *B. Patients having diarrhea without steatorrhea*

In addition, it is important to establish that the test is not altered simply by decreased intestinal transit time with no overt abnormality in intestinal absorption. Our data indicate that simple diarrhea produces no modification in the normal xylose test response—indeed, the mean blood curve tended to be higher than the established mean normal curve. Conversely, a flat, abnormal xylose test response in the presence of diarrhea should arouse the suspicion of steatorrhea.

#### *C. Patients with steatorrhea*

##### *1. Idiopathic sprue*

In this study, low blood and urine levels of xylose were found in 14 out of 15 tests performed on patients having active, untreated idiopathic sprue. This agrees with data obtained in this illness by previous investigators.<sup>17, 18</sup> One false-negative response was observed in which a normal xylose test was obtained in the presence of definite steatorrhea; no adequate explanation of this observation can be offered. In general, there was a parallelism between the abnormality in fecal fat excretion and that in the xylose test response.

This parallelism between the two tests continued during treatment when the latter resulted in improved intestinal absorption of fat with alleviation of clinical symptoms and other biochemical abnormalities. A satisfactory clinical response occurred in 14 of the 15 patients who received treatment in this investigation. In 13 of these 14 there was a concomitant improvement in fat absorption and the xylose test, whether treatment consisted of oral cortisone or the gluten-free diet, or a combination of both. Many of the tests in this study were done before maximal clinical improvement was obtained, and this explanation may be responsible for the apparent lack of response in the xylose test in the fourteenth patient, who had received the



gluten-free diet for 26 days. The rapidity of response to this diet varies in different individuals; in some, the response may not appear for as long as three to six months.

Emphasis should also be placed on the observation that, in three patients with idiopathic sprue, withdrawal of treatment was associated with clinical relapse and aggravation of fecal fat excretion. In each of these patients an abnormally flat response to the xylose test reappeared during the relapse (table 4).

In the idiopathic types of intestinal malabsorption it is customary to include tropical sprue and celiac disease in infants with idiopathic or non-tropical sprue. It is noteworthy that the abnormally flat responses we have observed in our patients with idiopathic sprue have also been described recently in celiac disease<sup>24</sup> and in tropical sprue.<sup>25</sup>

These various observations suggest that d-xylose is a more useful test substance than is glucose in assessing intestinal absorption. The failure of cortisone to alter the xylose test response in normal individuals is an additional desirable feature not met by the oral d-glucose tolerance test. Unfortunately, the fate of about 16.5 gm. of d-xylose during the test is unknown, and although it has been suggested that this amount may be utilized by peripheral oxidation,<sup>19a</sup> no verification of this theory has yet appeared.

## 2. Secondary steatorrhea

In our experience, the xylose test fails to mirror the abnormality in fat absorption in the majority of patients with untreated secondary steatorrhea. Abnormally flat tests were observed in only four out of 15 patients. This might indicate that a selective absorptive defect exists in which carbohydrate absorption remains normal in spite of defective fat absorption. One patient with a low pretreatment test responded in a manner similar to the idiopathic sprue patients during treatment. On the other hand, an alternative explanation must be sought to account for the few cases where excessively high blood xylose levels were present before treatment. This raises the problem of the intermediary metabolism of d-xylose, about which there is little information in the literature. Renal disease, by interfering with xylose excretion, is said to cause accumulation of xylose in the blood, resulting in high blood levels.<sup>21</sup> Neither of our patients had any evidence of gross impairment of renal function. The importance of the liver and of peripheral oxidative mechanisms in the disposal of d-xylose is not yet well defined, and it is conceivable that defects at these sites might give rise to abnormalities in the test. Classification of the patients in the secondary steatorrhea group into the various types of underlying disease responsible for intestinal malabsorption did not throw any light on the type of xylose test response observed.

While there appear to be no objections to the use of d-xylose in the assessment of intestinal absorption, several important factors remain to be considered. We have not demonstrated that the changes noted in the xylose

test are related to alterations in the intestinal absorption of other carbohydrates, such as glucose. Although the absorption of both d-xylose and glucose is probably modified in a similar manner by treatment, we can neither confirm nor deny this conjecture at this stage of our investigation. Furthermore, the demonstration that cortisone did not appear to alter the intermediary metabolism of xylose in normals led us to use this sugar in preference to glucose during treatment of the malabsorption syndrome with cortisone. However, the oral glucose tolerance test may prove to be entirely satisfactory in assessing the response to the gluten-free diet. Further clinical evaluation of the test is required, especially in the presence of illnesses which might be expected to alter the test response if the intermediary metabolism of d-xylose is important. For this purpose, study of the test in diabetes mellitus, hepatic disease and renal disease might be informative when performed in subjects selected because of normal gastrointestinal function. This investigation has been initiated by the authors, but at the present time insufficient data are available.

While this investigation was in progress a number of reports have appeared<sup>26-37</sup> in which clinical and laboratory improvement was noted in patients with idiopathic sprue during treatment with ACTH and cortisone. Carbohydrate absorption was measured by oral glucose tolerance tests in seven of these reports,<sup>30, 31, 32, 34, 35, 36, 37</sup> and improvement in the test during treatment was noted in only three of these. Our experience with the oral d-xylose tolerance test in idiopathic sprue suggests that both cortisone and the gluten-free diet have a definitely beneficial effect on carbohydrate absorption. Typical changes in the xylose test may be expected prior to treatment, and may prove to be of diagnostic value. Gradual improvement in the test occurring during treatment is useful in assessing the patient's response.

#### SUMMARY

1. In 25 normal individuals the oral d-xylose tolerance test gave a reproducible response which was not altered by the administration of cortisone.

2. The test in active, untreated idiopathic sprue in adults is characterized by low blood and urine xylose levels. Significant elevation of these levels occurs during successful treatment of the malabsorption. When relapse of the illness occurs after withdrawal of therapy, there is a concomitant reappearance of abnormalities in the xylose test. A normal test response was noted during spontaneous remission of the disease. It is concluded that these changes reflect variations in intestinal absorptive capacity. The xylose test is useful in assessing response to treatment, and may prove to be of diagnostic value.

3. Abnormalities in the xylose test did not invariably accompany defective fat absorption in untreated secondary steatorrhea—indeed, the test was

more frequently normal than abnormal. Some theoretic explanations of this difference in the two groups of patients are offered.

#### SUMMARY IN INTERLINGUA

Le test del tolerantia de xylosa esseva studiate como medio pro evaluar le absorption de hydrato de carbon in un gruppo de patientes con varie typos de disordine intestinal. Le test es executate per le administration de 25 g de d-xylosa dissoluite in 500 cm<sup>3</sup> de aqua, con le patiente in stato jejun, sequite per le mesuration del nivellos sanguinee de d-xylosa a intervallos de un hora durante cinque horas e del excretion urinari de d-xylosa pro le complete periodo de cinque horas. Le responsa obtenite in individuos normal es reproducibile e non es alterate per le administration oral de cortisona, de maniera que un alteration occurrente in patientes sub tractamento con steroides es probabilemente interpretabile como expression de un meliorate absorption e non como effecto del metabolismo intermediari. Patientes con diarrhea sed sin steatorrhea responde normalmente in le test. Patientes adulte con active sprue idiopathic ante le tractamento revela un deprimate curva de xylosa in le sanguine e basse nivellos del substantia in le urina. Tractamento a bon successo o remission spontanee restaura le normalitate del responsa. Quando le tractamento es interrompate e un recidiva occorre, le responsa in le test redeveni anormal.

Multes del patientes con steatorrhea secundari causate per lesiones intestinal etc. habeva un responsa normal in le test. In casos sporadic, il habeva mesmo excessivamente alte nivellos sanguinee, non explicabile super le base de morbo renal. Iste resultados suggere que studios additional del metabolismo intermediari de d-xylosa es requirite, specialmente in patientes qui suffre de diabete mellite, disordines hepatic, e dysfunction renal. Tal studios es in progresso.

Es concludite que le test es de valor in steatorrhea idiopathic como medio pro establir le diagnose e estimar le resultados del therapia. Illo pote esser de adjuta in distinguer patientes qui suffre de steatorrhea secundari, sed illo es multo minus adjuvante in sequer le progresso de tal casos.

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## THE COURSE OF PRIMARY HYPERTENSION IN THE YOUNG\*†

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THERE is considerable evidence that primary (essential) hypertension often begins in youth or early adult life.<sup>1,2,3,4</sup> It has been claimed that its course is less rapid when it is contracted at a later age.<sup>5,6</sup> The present study was undertaken to contrast the course of those who develop the disorder when they are young with the natural history of the disease in all age groups.

### CLINICAL MATERIAL

All cases were selected from the records of the Presbyterian Hospital. Thirty patients were found whose established diastolic hypertension<sup>7</sup> (constant and repeated blood pressure values of 90 mm. of Hg or higher) was known to have appeared at less than 25 years of age and in whom it was possible to follow the subsequent course. Patients with secondary hypertension<sup>7</sup> were excluded from the series. No patient was followed for less than 10 years, although the duration of observation was not a criterion for inclusion in the group.

### RESULTS

The results are summarized in table 1. There were 11 male and 21 female subjects in the group. Seven were Negro. The average age at the time of diagnosis was 20, and ranged from 10 through 24. Five were 15 years of age or younger. No difference was apparent in the age at onset of the two sexes, but the diagnosis of hypertension was not made in any of the Negro patients before the age of 19.

The initial casually recorded blood pressure ranged from 140/90 to 200/140 mm. of Hg, and bore no relationship to the subsequent course. The diastolic blood pressure at the time of diagnosis was 120 mm. of Hg or higher in seven of the group.

Eight patients (three men and five women) have died after a mean survival period of 21 years, the duration of the disorder in the cases followed until death having varied from 10 to as long as 40 years in one male subject. Four of these developed the accelerated ("malignant") form of hypertension, documented at autopsy. Three patients died of a cerebral hemorrhage, and in one the cause of death could not be determined.

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The remaining 22 patients are still alive, having been followed for an average period of 20 years (range, 10 to 37). Of the eight patients who have survived for 20 or more years, seven are women. Five of the survivors have had cardiac pain or signs and symptoms of congestive failure; one has

TABLE 1  
Clinical Data: 30 Patients with Primary Hypertension with  
Onset Before 25 Years of Age

Patient	Sex	Race	Age on Diag.	Years of Obs.	Living or Dead	Initial B.P.	Remarks
1. F. W.	F	W	23	18	L	150/90	No symptoms
2. E. E.	F	N	19	20	L	160/120	Dyspnea
3. M. G.	M	N	23	18	L	148/90	Proteinuria, retinopathy
4. M. G.	F	W	23	12	L	190/110	Cardiac pain, dyspnea, proteinuria
5. L. W.	M	W	14	14	L	150/90	No symptoms
6. R. G.	F	W	23	36	L	180/120	Cerebral thrombosis, proteinuria
7. J. S.	M	W	24	18	L	170/110	Retinopathy, protein- uria
8. J. K.	M	W	21	24	L	140/90	No symptoms
9. E. G.	M	W	11	11	L	160/110	No symptoms
10. R. K.	F	W	23	25	L	150/95	Cardiac pain, myocar- dial infarction
11. M. P.	F	W	22	10	L	140/90	Headaches
12. R. S.	F	W	20	27	L	140/90	Proteinuria
13. M. L.	M	W	15	11	L	200/140	No symptoms
14. N. J.	F	N	24	34	L	190/120	Proteinuria, ret- inopathy, dyspnea
15. N. M.	F	W	16	22	L	160/100	No symptoms
16. M. D.	F	W	22	11	L	184/120	Headaches
17. L. S.	F	W	21	10	L	180/110	No symptoms
18. C. W.	F	N	21	37	L	186/110	No symptoms
19. A. A.	M	W	10	19	L	146/94	No symptoms
20. E. B.	F	N	24	15	L	154/102	Dizziness
21. H. C.	M	W	21	16	L	175/100	No symptoms
22. E. S.	F	N	24	16	L	150/100	Cardiac pain, dyspnea
23. D. R.	F	W	24	15	D	190/120	Uremia
24. M. I.	F	W	23	20	D	150/96	?
25. N. T.	F	N	24	34	D	180/116	Cerebral hemorrhage
26. W. S.	M	W	17	40	D	170/100	Cerebral hemorrhage
27. E. T.	F	W	14	10	D	160/100	Uremia
28. M. A.	F	W	24	15	D	180/120	Cerebral hemorrhage
29. J. D.	M	W	19	11	D	160/90	Uremia
30. R. K.	M	W	17	22	D	170/100	Uremia, congestive failure

had a cerebral vascular accident; six now have proteinuria, and three have recently been found to have retinal hemorrhages. The remainder, save for cardiac hypertrophy in the majority, are free of demonstrable organic complications. Half of those who are still living complain frequently of headaches, nervousness, palpitation or dizziness; the rest have no subjective symptoms.

#### DISCUSSION

The present study, indicating that the average young hypertensive lives for a mean period of *at least* 20 years after diagnosis, may be compared to

the 20 years of mean survival observed in this clinic in 150 patients with primary hypertension followed from onset until death (average age at onset, 32).<sup>8</sup> These data point again to the fact that the initial level of the casually recorded blood pressure cannot be correlated with the rate of progression or the subsequent development of complications. From the standpoint of approach and management, these findings suggest that the course of the disorder in younger patients is not necessarily more rapid than that in older patients.

#### SUMMARY

The course of 30 patients whose diagnosis of documented primary hypertension was established prior to 25 years of age has been described. Eight have died after a mean survival period of 21 years; 22 are still alive after an average period of observation of 20 years. These results do not support the view that the disorder is necessarily more severe when it is contracted in youth.

#### SUMMARIO IN INTERLINGUA

Il existe indicationes que hypertension primari (essential) comencia frequentemente durante le prime phases del vita adulte, e certe autores ha postulate que le curso del morbo es plus rapide quando illo se initia durante le annos del juventute.

Esseva studiate 30 patientes in qui le "establite" hypertension diastolic esseva manifeste ante le etate de 25 annos. Patientes con hypertension secundari esseva excludite ab le serie. Octo patientes moriva post un superviventia medie de 21 annos (con le extremos de 10 e 40 annos). Le altere 22 patientes ha remanite sub observation durante un periodo medie de 20 annos (con le extremos de 10 e 37 annos). Le datos obtenite in iste studio signala de novo le facto que le nivello initial del casual pression de sanguine non pote esser correlationate con le rapiditate del progression de hypertension. In plus, le datos suggere que le curso de hypertension primari a contraction precoce non es necessarimente plus rapide que quando illo es contrahite a un etate plus avantiate.

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## THE ELECTROCARDIOGRAM IN NEUROCIRCULATORY ASTHENIA (ANXIETY, NEUROSIS OR NEURASTHENIA): A STUDY OF 203 NEUROCIRCULATORY ASTHENIA PATIENTS AND 757 HEALTHY CONTROLS IN THE FRAMINGHAM STUDY \*

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A NUMBER of reports have suggested that neurocirculatory asthenia, sometimes called anxiety neurosis or neurasthenia,<sup>1</sup> is a cause of or is associated with electrocardiographic abnormalities.<sup>2-9</sup> The nature of these abnormalities was variable and in some instances resembled those found in organic heart disease. Such variations as transient S-T segment deviation<sup>3,4</sup> and T-wave flattening or inversion<sup>2</sup> are among those considered to be due to neurocirculatory asthenia. Other reports do not support these claims.<sup>10,14</sup>

In view of the fact that an electrocardiogram is a common laboratory test used not only in cardiac patients but also as part of the complete medical examination in individuals with few or no cardiovascular symptoms, the interpretation of minor electrocardiographic changes has assumed increased importance. For this reason it seems desirable to clarify the issue regarding electrocardiographic abnormalities in neurocirculatory asthenia.

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The present study was done to determine whether electrocardiographic abnormalities found in patients with neurocirculatory asthenia, hereafter referred to as NCA, occur with the same or different frequency as in a similar group without NCA. The electrocardiographic findings in 203 subjects with NCA who were free of cardiac disease or hypertension were studied and compared to those of 757 healthy control subjects.

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This study provided an opportunity to examine with modern electrocardiographic technics<sup>15</sup> (three standard leads, three unipolar limb leads, and precordial unipolar leads V<sub>3</sub>R and V<sub>1</sub>-V<sub>6</sub>) a series of patients with NCA and a comparable control series studied under identical laboratory and clinical conditions. This type of systematic study, using present-day electrocardiographic technics, has heretofore not been done.

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## MATERIAL AND METHODS

The subjects in this study were examined during the routine activities of the Framingham Heart Disease Epidemiology Study. The methods and objectives of the Framingham Study have been described in detail elsewhere.<sup>16</sup> The subjects originally selected for examination in this program represented a random sample of the residents of the town of Framingham, Massachusetts, who were between the ages of 30 and 60 years. Each subject was thoroughly examined for evidence of heart disease and hypertension. The observations included a 13-lead electrocardiogram, chest x-ray film, detailed cardiovascular history and physical examination, and blood chemical determinations. Diagnoses were based upon the criteria recommended by the New York Heart Association.<sup>17</sup>

A standardized cardiovascular examination form was used to insure answers to specific questions. In the form used, no provision was made for a specific diagnosis of NCA by the examining physician. However, all the

TABLE 1

## Criteria for the Diagnosis of Neurocirculatory Asthenia

1. The subject must have a *respiratory complaint*, e.g., sighing respiration, inability to get a deep or satisfactory breath, smothering and choking, or complaint of dyspnea.
2. The subject must also have one or more symptoms from two of the following three symptom groups.

Group 1: palpitation, chest pain, chest discomfort.

Group 2: nervousness, dizziness, faintness, discomfort in crowds.

Group 3: undue fatigability or tiredness, or limitation of activities.

symptoms entering into a diagnosis of NCA were inquired for and recorded. Consequently, a diagnosis of NCA was not always made at the time of the original examination but was made by reviewing the records using the criteria outlined in table 1. The diagnosis of NCA was made without knowledge of the electrocardiographic findings. The records of 1,214 consecutively admitted adults examined in the period September, 1950, to September, 1952, were reviewed to determine the correlation between NCA and electrocardiographic abnormalities.

There is a great variability in the literature concerning diagnostic criteria for the syndrome of NCA. For purposes of this study, NCA is defined as a symptom complex consisting of: characteristic *respiratory* complaints (sighing respiration, inability to get a good deep breath, smothering or choking sensations, or dyspnea); *cardiovascular* complaints of palpitation and chest discomfort; *nervous* complaints of nervousness, dizziness, faintness, or discomfort in crowds; *general* symptoms of easy fatigability, tiredness or limitation of activity. In the present study, the criteria shown in table 1 were used in establishing a diagnosis of NCA.

The diagnosis of NCA, as in most studies,<sup>18, 19, 20</sup> is based upon a record of subjective symptoms, some of which may be present in many normal

TABLE 2  
Prevalence of NCA in 1,214 Consecutive Examinations

Group	Number of Individuals	Proportion of Individuals in Each Group
Definite NCA	141	11.6%
Possible NCA	136	11.2%
No NCA	937	77.2%
Total	1,214	100.0%

people. There are varying degrees of severity of NCA. Patients with a lesser number of symptoms might be considered to be within normal limits by some physicians. For this reason it seemed desirable to divide the NCA group into two categories. The division was done on the basis of number of symptoms. Persons with five or more symptoms were considered to have definite NCA. Those with three or four symptoms were classified as having possible NCA. To determine the validity of this method of diagnosis made from previously recorded symptoms, a group of 20 subjects, which included five diagnosed as NCA by the above criteria, were examined

TABLE 3  
Prevalence of NCA in the Group Free of Heart Disease or Hypertension

Group	Number of Patients	Proportion of Individuals in Each Group
Definite NCA	104	10.8%
Possible NCA	99	10.3%
No NCA	757	78.9%
Total	960	100.0%

by one of us (M. E. C.) without prior clinical information concerning any of them. This examiner concurred in the diagnosis of NCA or its exclusion in all these subjects.

Since it would be difficult to allocate the etiology of electrocardiographic abnormalities in the presence of significant cardiovascular disease, all subjects with heart disease and hypertension were excluded from further consideration in the study. There were 254 persons with hypertension, hypertensive heart disease, rheumatic heart disease, arteriosclerotic heart disease and congenital heart disease who were thus removed from the study. No patients were excluded from this study on the basis of electrocardiographic

TABLE 4  
Occurrence of Electrocardiographic Abnormalities in Subjects with NCA and Controls

Group	Number of Patients	Abnormal Electro- cardiograms	Proportion of Each Group with Ab- normal Electro- cardiograms*
Definite NCA	104	9	8.7%
Possible NCA	99	9	9.1%
No NCA	757	55	7.3%

\* The small differences in proportions of abnormal electrocardiograms in each group are not statistically significant ( $P > 0.7$ ).

TABLE 5  
Kinds of Unexplained Electrocardiographic Abnormalities

Type of Abnormality*	Controls (Free of Heart Disease, High Blood Pressure and NCA)		Definite NCA		Possible NCA
	(757)		(104)		(99)
	No.	%	No.	%	No. and Approximate %
Nonspecific S-T and T-wave changes	25	3.4	4	3.7	1
Possible nonspecific abnormality	4	0.5	0	0.0	1
Incomplete right bundle branch block	6	0.8	0	0.0	2
Right bundle branch block	2	0.3	0	0.0	0
Prolonged P-R	1	0.1	1	1.0	2
Sinus tachycardia	1	0.1	0	0.0	0
Possible left ventricular hypertrophy	10	1.4	1	1.0	1
Left ventricular hypertrophy	2	0.3	0	0.0	0
Possible right ventricular hypertrophy	1	0.1	0	0.0	0
Wolff-Parkinson-White	1	0.1	1	1.0	0
Ectopic auricular pacemaker	1	0.1	1	1.0	0
Intraventricular block	1	0.1	0	0.0	0
Prolonged Q-T with wide T-wave	0	0.0	1	1.0	0
Wandering pacemaker	0	0.0	0	0.0	1
Left bundle branch block	0	0.0	0	0.0	1
Totals	55	7.3	9	8.7	9

\* Criteria for reading electrocardiograms were based upon bipolar, unipolar and vector concepts, and in general conform to those listed in many standard textbooks on electrocardiography. It is difficult to discuss in detail all the ramifications of interpreting electrocardiograms without writing another such book.

In brief, some of the minimal diagnostic criteria entering into the more common and significant electrocardiographic abnormalities were as follows:

**Nonspecific Abnormal:** This consisted of S-T segment depression and T-wave inversions or flattening without other explanation in leads where these were not usually found and when there was no more specific electrocardiographic explanation for their occurrence (e.g., secondary T-wave changes).

**Ventricular Conduction Defect:** A conduction defect is said to exist when the QRS duration was 0.11 second or longer in the standard leads; 0.11 to 0.12 second was considered to be incomplete, and over 0.12 second, complete. The type (left or right bundle branch block) was determined by comparing the time of ventricular activation in the right and left precordial leads. Left bundle branch block was diagnosed when the peak of the R-wave occurred at 0.07 second or greater over the left precordial leads, and right bundle branch block when the peak of the R-wave occurred late over the right precordial leads.

**Prolonged P-R Interval:** A-V block was considered to exist when the P-R interval was greater than 0.24 second. (Rate was not taken into consideration.) Possible first degree A-V block was considered when the P-R interval was 0.20 to 0.24 second.

**Sinus Tachycardia:** This was considered to be present when the ventricular rate was in excess of 110, provided atrial tachycardia was not present.

**Ventricular Hypertrophy:** This consisted of a tracing exhibiting a slight delay in the onset of the intrinsicoid deflection (ventricular activation time) associated with an increase in the size of R-waves, depressed S-T segments and flattened or inverted T-waves in the leads reflecting potentials over the region of the right or left ventricles (right or left ventricular hypertrophy). Ventricular activation time is generally considered to be delayed in leads over the left ventricle if 0.05 to 0.07 second from the onset of QRS, over the right ventricle if greater than 0.03 second.

**Possible Ventricular Hypertrophy:** This was designated in tracings exhibiting the same factors enumerated above except that these were present in less striking degree or were not all present.

**Wolff-Parkinson-White Syndrome:** This was considered when there was a short P-R interval (0.10 second or less, and rarely longer than 0.12 second) in association with a wide QRS with



abnormalities alone. There remained a group of 960 persons who were considered to be free of cardiovascular disease.

It is impracticable here to describe exact criteria for the classification of all electrocardiograms. However, it is possible to classify them as normal, doubtful or abnormal, and to list the abnormalities which were found to occur based on contemporary methods of electrocardiographic interpretation.<sup>15</sup>

In this study the electrocardiograms had all been interpreted before analysis of the clinical record for evidence of NCA. Hence it was not possible for the interpreter to be influenced by a diagnosis of NCA. In addition, all of the abnormal or unusual tracings were reviewed by a consultant in electrocardiography. To avoid the possibility that minor abnormalities might have been overlooked in routine reading of electrocardiograms, the entire 960 tracings were reviewed for this purpose. So as not to minimize the importance of these minor abnormalities, all the doubtful electrocardiograms were classed as abnormal for this study.

#### OBSERVATIONS

It was found that 277 (22.8%) of the 1,214 subjects reviewed in this manner could be classified in the NCA group (table 2).

When this group was diminished by removal of 254 subjects with cardiovascular disease, the remaining group of 960 persons included 203 subjects with a diagnosis of definite or possible NCA (table 3).

It was evident that the distribution of NCA was essentially the same in those free of cardiovascular disease as it was in the entire group.

There were 203 cases of NCA without heart disease. The definite NCA group (104 cases) contained 82.7% women; the possible NCA group (99 cases), 70.7% women; the group without NCA symptoms (757 individuals), 51.8% women.

The distribution of abnormal electrocardiograms in the group free of cardiovascular disease was as shown in table 4.

The frequencies of electrocardiographic abnormalities observed in the NCA groups were similar to those encountered in the group without NCA, and the slight differences between patient and controls were proved to be without statistical significance. Table 5 shows that these abnormalities were sufficiently diverse to indicate that there was no consistent electrocardiographic pattern associated with NCA. The slight differences found from group to group were obviously not statistically significant (table 5).

It is apparent from table 6 that when the data are arranged by age and

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slurring of the upstroke (delta wave), and the sum of the P-R and QRS duration (P-J interval) was 0.26 second or less.

*Ectopic Auricular Pacemaker:* This was considered to be present when a regular rhythm at usual rates was associated with inverted P-wave in Leads I and/or II, and when the P-R interval was greater than 0.11 second.

*Wandering Pacemaker:* This was indicated by the varying appearances of P-waves and varying P-R intervals in any one lead, with associated irregularity of the R-R interval.

sex the percentage of electrocardiographic abnormalities in the controls and the NCA groups remains comparable in each decade.

### DISCUSSION

The data of this study indicate clearly that there was no higher frequency or difference of kind of electrocardiographic abnormalities in subjects diagnosed NCA than was found in healthy individuals. The question of course arises whether the patients of this study did in fact have NCA, or whether they are similar to the subjects described in other papers discussing the electrocardiogram in neurocirculatory asthenia. At the outset it should be said that there is no way at present to prove or disprove that an individual

TABLE 6  
Occurrence of Electrocardiographic Changes in Persons Without Clinical Cardiovascular Disease: Age and Sex Distributions of Abnormal Electrocardiograms of Those With and Without NCA

Age Decade	Sex	Total Number	Definite NCA Proportion with Abnormal EKG			Possible NCA Proportion with Abnormal EKG			No NCA Proportion with Abnormal EKG		
			No.	Total	%	No.	Total	%	No.	Total	%
30-39	M	154	0	7		2	8		7	139	5.0
	F	218	3	34	8.8	1	28	3.6	10	156	6.4
40-49	M	142	0	5		0	11		11	126	8.7
	F	201	4	30	13.3	2	25	8.0	11	146	7.5
50-59	M	116	0	6		2	10		9	100	9.0
	F	129	2	22	9.1	2	17		7	90	7.8
Total		960	9	104	8.7	9	99	9.1	55	757	7.3

Percentages calculated in subgroups of 20 or more cases.

has NCA. Certainly many patients come to doctors with the symptoms enumerated in table 5 with varying degrees of disability. NCA was characterized by White as follows: "Neurocirculatory asthenia is a condition of ill health characterized by a group of symptoms consisting of dyspnea (often with sighing respiration), palpitation, exhaustion, precordial pain (most often an ache), dizziness, nervousness, sometimes tremor, sweating, headache and syncope aggravated by effort or excitement."<sup>18</sup> The original paper using the term "neurocirculatory asthenia" was published in 1918 by Oppenheimer et al.<sup>19</sup>

For the purpose of this study we used a definition (table 1) of the type previously used in studies of the familial characteristics of NCA<sup>21</sup> and in a follow-up study of subjects with NCA.<sup>20</sup> That definition was based upon the findings in subjects diagnosed as NCA by cardiologists and anxiety neurosis or neurasthenia by psychiatrists. These showed the same clinical symptoms described here, in addition to such physiologic abnormalities as

sighing respiration, high blood lactate concentration during and after exercise, and low oxygen consumption in response to exercise. They also had abnormal scores in psychologic tests and a familial prevalence of NCA which suggested a Mendelian dominant trait.<sup>21, 22, 23, 24, 25, 11, 1</sup>

The prevalence of NCA observed in this study may be artificially high, since the method of selection of patients with NCA would not always have excluded patients with hysteria or depression, two common psychiatric illnesses which often have cardiovascular and respiratory symptoms similar to those of NCA, and might include some individuals with such symptoms from other causes. However, half of those selected impressed the examiner sufficiently at the initial examination to make him record a diagnosis of NCA even though not specifically requested to do so.

Various estimates of the prevalence of NCA have been made. A small population study reported by Cohen and White<sup>1</sup> gave a prevalence of 4.7%; a survey study, a prevalence of 13.7%;<sup>28</sup> an employee health plan survey, 8.8%;<sup>29</sup> a cardiologist's office study, 12%.<sup>30</sup> One factor which may influence the prevalence of NCA in the present sample is the use of age-selected patients. Since the mean age of onset of NCA is around 26 years, and the extreme age of onset is around 35 years, the 30-to-60 year group sample probably contained most of the NCA patients.<sup>20</sup>

It should be noted that in the mild or questionable cases of NCA the percentages of electrocardiographic abnormalities are almost identical with those found in healthy controls.

This study does not consider the question of the effects of apprehension and feelings of "anxiety" upon the electrocardiogram. No attempt was made to separate those in an acute exacerbation of NCA from those with chronic symptoms or those in a remission. However, it would be expected that the group of NCA patients would include some in each of these phases, and consequently should reflect a higher incidence of electrocardiographic changes in the NCA group than in the controls if they actually occur in NCA.

It is not clear that apprehensiveness has a specific effect on the electrocardiogram. Studies which report specific effects of "anxiety" show no changes other than those which might be expected as changes accompanying increased heart rate or hyperventilation, regardless of the cause.<sup>2, 8, 9</sup> A previous study showed that in 100 patients—50 hospitalized in a civilian psychiatric ward and 50 in a wartime military hospital for symptoms which included anxiety, nervousness, apprehension and NCA—no significant electrocardiographic abnormalities were noted.<sup>14</sup>

The source of disagreement as to whether NCA results in electrocardiographic abnormalities appears to have arisen from failure to use adequate control material and from the somewhat biased selection of patients with NCA. In studies in which the electrocardiographic abnormalities of a complete sample of NCA patients are reported, the occasional abnormality has not proved to be significant when viewed in light of the range of variation

of the "normal" electrocardiogram. It would seem from the present data and from those of other studies<sup>81, 18, 13</sup> that it can be concluded that abnormal electrocardiograms are not distinctly associated with NCA.

Since in many cases the electrocardiogram can be regarded as an objective indicator of heart disease, it is important not to blame specific electrocardiographic abnormalities on NCA, since NCA does not cause such abnormalities.

#### CONCLUSIONS

1. Based on the study of 203 cases of neurocirculatory asthenia and 757 control subjects free of cardiovascular disease, it was concluded that there is no characteristic electrocardiographic abnormality associated with neurocirculatory asthenia.

2. Electrocardiographic abnormalities characteristic of heart disease or suggesting heart disease do not occur as manifestations of uncomplicated neurocirculatory asthenia.

3. The same kinds of abnormalities found in the electrocardiograms of neurocirculatory asthenia patients are found in healthy controls, and in the same frequency.

#### ACKNOWLEDGMENTS

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#### SUMMARIO IN INTERLINGUA

Esseva examinate le dossiers de 1.214 adultos studiate consecutivamente in le Programma de Studios Epidemiologic de Morbo Cardiac a Framingham, Massachusetts, con le objectivo de determinar si asthenia neurocirculatori (ANC) esseva associate con anormalitates electrocardiographic. Le diagnose de ANC esseva basate super un historia de symptomatas subjective registrate secundo pre-formulate criterios. Le electrocardiogrammas esseva interpretate secundo le currentemente acceptate criterios. Un summario de istos es presentate. Post le exclusion de subjectos con morbo cardiovascular e hypertension, le serie remanente pro le presente studio consisteva de 203 patientes con ANC e 757 normal subjectos de controlo. Le meticulose examine del electrocardiogrammas de iste duo gruppos revelava que le mesme typos de anormalitate electrocardiographic occurreva in patientes con ANC e in subjectos de controlo. Etiam le frequentia de ille anormalitates esseva le mesme. Nulle configuration electrocardiographic esseva recognoscite como characteristicamente associate con ANC.

Esseva concludite que le anormalitates electrocardiographic que signala le presentia de morbo del corde non occurre como resultado de ANC. Assi, quando significative anormalitates electrocardiographic es constatate, illos deberea esser interpretate sin referencia al co-existente symptomatas de ANC.

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## THE VITAMIN B<sub>12</sub> CONTENT OF HUMAN LIVER AS DETERMINED BY BIO-ASSAY OF NEEDLE BIOPSY MATERIAL \*†

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THE vitamin B<sub>12</sub> content of human liver postmortem specimens has been previously studied,<sup>1, 8</sup> and changes have been noted in pernicious anemia in relapse<sup>1</sup> and in cirrhosis.<sup>8</sup> These valuable contributions were necessarily of a static nature, and defined the liver vitamin B<sub>12</sub> content after death in certain patients who could not be followed by serial determinations during life. Studies with radioactive labeled vitamin B<sub>12</sub><sup>2, 4, 5, 7</sup> have done much to clarify the relative contents of various body organs and the rate at which absorption takes place from the bowel and parenterally. It has been shown that, in the human, the liver stores most of the vitamin absorbed and injected, but it has not been possible to determine exact content at any stage of health or disease.

Our desire to devise a method for the determination of vitamin B<sub>12</sub> content of the human liver during life and to correlate these values with various disease conditions prompted the present study. Since percutaneous needle biopsy is a reliable and relatively safe<sup>9, 10</sup> method of obtaining liver tissue, it was decided to combine this procedure with bio-assay of liver specimens in an attempt to work out such relationships.

### METHODS

Liver biopsies were obtained for the most part by the transthoracic route, employing a modified Silverman needle and a procedure previously described.<sup>6</sup> A small number were furnished by the surgical service, obtained during a laparotomy, and a similar needle was used in all but one of these. When obtained, the biopsy was freed from the groove in the inner needle, and a suitable portion of the distal, or deepest, part of the biopsy separated with sterile scissors and placed in a sterile petri dish opened by an assistant (figure 1). The dish was marked with the name and number of the patient and the date, and was placed in the freezing compartment of the laboratory refrigerator. The remainder of the liver biopsy specimen was placed in

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formalin solution and sent to the pathology laboratory for histologic examination. It was felt necessary to use the distal segment of tissue to obtain the most representative specimen and to avoid artifacts introduced by possible capsular thickening and inflammation. Examination of the proximal segment helped to establish the nature of any pathologic process present and to determine infiltration by tumor tissue.

*Determination of Total Vitamin B<sub>12</sub>*: Liver was stored at minus 20° C. until assayed. Vitamin B<sub>12</sub> was extracted from the liver samples in the following manner: Autoclaved and weighed liver samples were homogenized with sodium acetate buffer of pH 4.6 and transferred to covered centrifuge



FIG. 1. Method of sectioning fresh liver biopsy specimen into sterile Petri dish.

tubes. Liver samples were then heated in a boiling water bath for 30 minutes to precipitate protein and liberate B<sub>12</sub> from the bound form. After cooling and centrifugation, the clear supernatant was assayed for vitamin B<sub>12</sub>, using Bacto-B<sub>12</sub> Assay Medium U.S.P. (Difco). *Lactobacillus leichmannii* ATCC 7830 was used as the test organism and crystalline vitamin B<sub>12</sub> was used as the standard. Since all of the samples were devoid of alkali-stable microbiologic activity, the B<sub>12</sub> values obtained represent a true measure of "vitamin B<sub>12</sub> activity." All the values for B<sub>12</sub> are expressed per gram of wet liver tissue.

#### PATIENT MATERIAL

Patients biopsied comprised three groups: (1) Twelve patients were used as controls; all had normal function tests consisting of serum proteins,



cephalin flocculation, thymol turbidity, serum bilirubin and bromsulfalein retention. The majority of these had a palpable liver and a history of liver disease, although all biopsy specimens were histologically normal. Three had benign peptic ulcer, proved at surgery, and two had questionable abdominal masses, disproved on exploration. In none was evidence of liver impairment found, either functional or histologic. (2) Eleven patients had metastatic tumor of the liver; most of these showed various abnormalities of liver function studies. (3) There were four cases of pernicious anemia; three were untreated, and one of these apparently had had a minimal amount of parenteral vitamin B<sub>12</sub> therapy.

TABLE 1  
Vitamin B<sub>12</sub> Liver Values in 12 Control Patients

Hosp. No.	Liver Vitamin B <sub>12</sub> millimicrograms/gm.
1. 23808	2,580
2. 23517	1,780
3. 22850	1,950
4. 23384	1,970
5. 24336	2,220
6. 24337	2,310
7. 12158	1,410
8. 5206	1,730
9. 23426	2,490
10. 25184	1,880
11. 24896	1,600
12. 24958	1,410
	Average—1,940

## RESULTS

*Control Group:* Values varied rather widely, but remained within definite limits (table 1), with a high of 2,580 and a low of 1,410 millimicrograms of B<sub>12</sub> per gram of liver. The average for the group was 1,940 millimicrograms, but since there may be rather wide variations of vitamin B<sub>12</sub> values in normal livers, it is felt important to emphasize the upper and lower limits of the controls, rather than the absolute average, for purposes of comparison with other groups.

*Metastatic Carcinoma:* Values in this group were generally below control levels, and those where the proximal portion of the biopsy was found to be infiltrated with tumor, with presumptive involvement of the distal portion, had markedly low vitamin B<sub>12</sub> content (table 2). Several of those without tumor involvement, obtained at surgery where the liver showed gross metastasis, had unexplained low values. The factors responsible for this change have yet to be determined.

*Pernicious Anemia:* Three cases of untreated pernicious anemia, with typical blood, bone marrow findings and positive Schilling tests, were biopsied prior to treatment (table 3). None of the three had measurable vitamin B<sub>12</sub> in the biopsy specimen. In one of these patients it was possible

TABLE 2

Vitamin B<sub>12</sub> Liver Values in 11 Patients with Tumor Involvement of the Liver

Hosp. No.	Vitamin B <sub>12</sub> millimicrograms/gm.
1. 22380	810 (spec. infiltrated)
2. 24051	780
3. 24061	2,030
4. 24431	1,880
5. 24339	<30 (spec. infiltrated)
6. 25030	2,760
7. 22027	1,060
8. 25020	1,280
9. 25451	1,530
10. 25345	1,000
11. 19633	430 (spec. infiltrated)

to obtain one additional biopsy, and in the other two, two and three additional biopsy specimens for assay during the treatment period with parenteral vitamin B<sub>12</sub>. There was a definite increase in liver content in two of these patients during the period, although one stored the vitamin more rapidly than the other. During this time, the subject with slower accumulation showed signs of nonspecific inflammation in the portal areas, which were classified by the pathology department as nonspecific hepatitis. Thymol turbidity and bromsulfalein retention were definitely abnormal at this time. There was, nevertheless, increased storage though at a slower rate. The third treated case who did not show any increase in B<sub>12</sub> in the second biopsy could not be evaluated histologically since all the available biopsy material was used up in the determination.

The fourth case was that of a 74 year old white female who was admitted with complaints of moderate epigastric pain and symptoms of mild hypothyroidism, later confirmed by protein-bound iodine and uptake studies. An upper gastrointestinal series showed a questionable lesion of the anterior wall of the stomach, diagnosed at gastroscopy as carcinoma. There was no

TABLE 3

Values of Vitamin B<sub>12</sub> in Four Pernicious Anemia Patients

Numbers 1, 2 and 3 were untreated. Second biopsy specimen in case 3 was too small to allow material for histologic examination, so cannot be confirmed as liver tissue. Case 4 had received a small amount of parenteral therapy prior to biopsy.

Hosp. No.	Date	Liver Vitamin B <sub>12</sub> millimicrograms/gm.
1. 22871	4/24/57	<30
	5/22/57	650
	9/24/57	1,290
2. 23450	6/14/57	<30
	7/9/57	400
	9/24/57	540
	2/13/58	1,040
3. 23805	7/18/57	<30
	9/23/57	<30
4. 23732	8/8/57	220
	1/30/58	1,630

free hydrochloric acid on fractional gastric analysis with histamine, and the patient was found to have a moderate hypochromic anemia. She was treated with desiccated thyroid for three weeks prior to surgery, and transfused. The diagnosis of carcinoma was confirmed at surgery, and a subtotal gastrectomy performed. The liver showed no metastases, and a biopsy specimen was taken during the procedure for purposes of study. Convalescence was uneventful, and bio-assay of the biopsy specimen revealed a very low vitamin B<sub>12</sub> content. The Schilling test was positive on two occasions. The patient was started on B<sub>12</sub> therapy, and a subsequent biopsy almost six

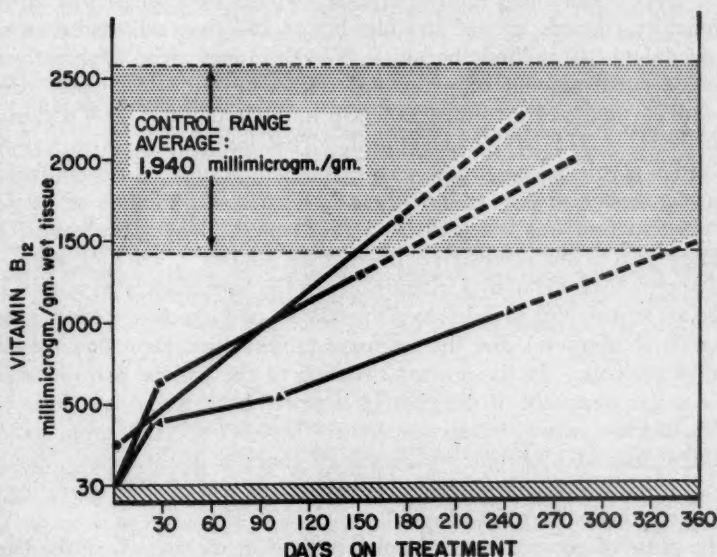


FIG. 2. Graph showing rates of accumulation of vitamin B<sub>12</sub> in livers of pernicious anemia patients under treatment. Lower line represents patient with inflammatory liver changes.

months later revealed marked improvement in liver vitamin B<sub>12</sub> content, to within control value levels. Questioning brought out the fact that her referring physician had treated her with a vitamin complex parenterally during the early stages of her disease.

#### DISCUSSION

The method presented has enabled us to determine the vitamin B<sub>12</sub> content of human liver during life, and in some instances in a serial fashion. A possible source of discrepancy exists in the infiltration of the distal (the assayed) segment with tumor, fibrosis or other changes which are not evident in the proximal segment studied histologically. This latter factor may be minimized when liver specimens and function studies appear to be normal.

Tumor infiltration of the biopsy lowers values markedly, and when there is almost complete replacement of liver tissue by tumor, vitamin B<sub>12</sub> is extremely low.

The rate of storage in three cases of pernicious anemia who had serial biopsies is shown graphically in figure 2, where it may be seen that in the two previously untreated cases there was with treatment an initial sharp rise of values, with a later, more gradual elevation. The patient with normal liver showed more rapid storage, and 153 days after start of treatment had a level of 1,290 millimicrograms per gram, or just below the lowest control level. The other untreated case, whose liver developed chronic inflammatory changes, gained steadily, but at 244 days still had a storage value of only 1,040 millimicrograms. The third case, who apparently had received a small amount of parenteral treatment prior to biopsy, gained most rapidly, and had accumulated 1,630 millimicrograms, well within the control level, at 175 days of treatment. This last patient, who was first suspected of pernicious anemia because of an assay reading of 220 millimicrograms, demonstrated only a hypochromic anemia at the time of surgery. Her true situation was suspected as a result of the biopsy evaluation, and was later proved by radioactive B<sub>12</sub> uptake studies (Schilling test). It would appear that the level of vitamin B<sub>12</sub> in the liver associated with a true macrocytic anemia due to pernicious anemia is somewhere between this level (220 millimicrograms) and the nonmeasurable values, shown in the three untreated patients. In the normal situation of the patient with pernicious anemia under treatment, if the vitamin is stored at a steady rate, liver vitamin B<sub>12</sub> reaches normal values somewhere between six and seven months. The third case, with chronic inflammatory changes in the biopsy, elevated thymol turbidity and bromsulfalein retention, was still capable of storing the vitamin, although at a reduced rate.

The cause of lowered values in metastatic liver disease where the biopsy specimen is not involved by tumor is still undetermined. It has been suggested<sup>3</sup> that the liver loses vitamin B<sub>12</sub> through necrosis when involved by tumor, but we have not found necrosis in such specimens.

The vitamin B<sub>12</sub> content of biopsy specimens from patients with other types of liver disease is at present the subject of continuing study to determine basic relationships and the possible value of this method in assessing liver damage.

#### SUMMARY

1. A method of bio-assay of human liver biopsy specimens for vitamin B<sub>12</sub> content is presented. Possible source of error in the procedure is discussed.

2. Vitamin B<sub>12</sub> values in a group of 12 controls varied rather widely, but within definite limits. Three untreated cases of pernicious anemia showed no demonstrable storage initially, and serial biopsies in two served to show the rate of accumulation. In one treated case, pernicious anemia



was first suspected when a liver biopsy taken at surgery showed unexpectedly low B<sub>12</sub> values. In 11 cases of metastatic liver disease it was noted that involvement of the biopsy specimen by tumor lowered values markedly, but in several members of this group, where the specimen showed no lesion, the levels were also low.

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#### SUMMARY IN INTERLINGUA

Specimens bioptic de hepate human, obtenite per biopsia transthoracic percutanea, esseva essayate pro lor contento de vitamina B<sub>12</sub>, con le uso de *Lactobacillus leichmannii* ATCC 7830 como organismo de proba. Medietates distal del specimens bioptic esseva usate pro objectivos de essayage e segmentos proximal pro tincturation e examine histologic. In 12 specimens de controllo, le valores variava inter 2.580 e 1.410 millimicrogrammas de vitamina B<sub>12</sub> per gramma de hepate humide. Le valor medie esseva 1.940 millimicrogrammas. In 11 casos de tumor metastatic del hepate, specimens con infiltration tumoric habeva multo basse valores, sed plure specimens sin infiltration tumoric etiam habeva valores infra le nivellos de controllo. In tres non-tractate casos de anemia perniciose, le valores initial esseva infra 30 millimicrogrammas. Postea, biopsias serial demonstrava le accumulation de vitamina B<sub>12</sub> sub le effecto del therapia. Un minimalmente tractate caso de anemia perniciose esseva diagnosticate initialmente super le base del bassissime contento de vitamina B<sub>12</sub> in un specimen bioptic obtenite al chirurgia. In un caso, intercurrente inflammation del hepate pareva relentar le accumulation.

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## SUBDURAL HEMATOMA RELATED TO ANTI-COAGULATION THERAPY\*

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SPONTANEOUS subdural hematoma is relatively rare. It has been reported as a complication of blood dyscrasias and, more recently, in association with ruptured aneurysm.<sup>1</sup> Although bleeding into tissues and body cavities as a complication of anticoagulation treatment is well known, there is a paucity of reports describing the development of intracranial subdural hematoma. The reason for this paucity may reflect its rarity, but insofar as subdural hematoma is readily detectable and often successfully treated, special emphasis of this complication is warranted. The present communication is concerned with two cases of subdural hematoma in relation to Dicumarol therapy for myocardial infarction. The failure to consider subdural hematoma instead of diffuse parenchymal or subarachnoid bleeding to explain the clinical picture resulted, in part, in the death of one of the patients. On the other hand, consideration of that possibility led to the discovery and successful treatment in the second patient.

### CASE REPORTS

*Case 1.* A 69 year old man was admitted to Bellevue Hospital on June 8, 1956, with the complaints of numbness and weakness of the left side of the face, and a suboccipital headache of a few hours' duration. The background history revealed hypertension and several cardiac episodes (auricular fibrillation) since 1938. The patient had been hospitalized in 1953 with a questionable myocardial infarct, and again in 1956 with mild congestive heart failure and angina pectoris.

On admission the pulse was irregular at 82/minute; his blood pressure was 185/119 mm. of Hg. The patient was alert and oriented in all spheres. There were no meningeal signs. The eyegrounds were normal. Except for a mild left facial paresis and relatively hyperactive deep tendon reflexes on the left, the remainder of the neurologic examination was normal. Laboratory tests showed a normal hemogram. The urine showed 3 plus albumin. The electrocardiogram revealed auricular fibrillation.

Treatment consisted of Digoxin, low salt diet and complete bed-rest. In addition, Dicumarol was started three days after admission (June 11) because of the possibility of embolization. A lumbar puncture on June 11 revealed clear and colorless fluid with no cells and a normal total protein. On June 17, six days after the start of Dicumarol therapy, the patient complained of occipital headache and ran a low grade fever. The headache persisted but the patient remained mentally clear and alert, with no significant changes in the neurologic status until June 21,

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when he rapidly lapsed into coma. At this time his pupils were equal and fixed to light and the corneal reflexes were absent. The deep tendon reflexes were hyperactive and equal, and bilateral ankle clonus was present. A second lumbar puncture (June 18), while the patient was still fully conscious, revealed slight xanthochromia. A third lumbar puncture, after the onset of coma, showed grossly bloody spinal fluid with supernatant xanthochromia. The patient died in the course of a tracheotomy to relieve marked respiratory distress and excessive secretions. At the time of death his prothrombin time was 21 seconds. During the entire course of Dicumarol therapy the prothrombin time was maintained between 21 and 26 seconds (control, 12 seconds).

Postmortem examination showed a 60 c.c. currant-jelly clot over the left cerebral hemisphere beneath the dura compressing the left parietal lobe. Section of the brain disclosed two small areas of old softening, one in the medial nucleus of the right thalamus, the other in the right temporal gyrus. There was a fresh hemorrhage, 3 mm. by 15 mm., in the midportion of the corpus callosum. Several recent small focal hemorrhages were scattered in the tegmentum, base of the pons and the lower midbrain. With the exception of generalized arteriosclerosis and an old myocardial infarct, there were no significant lesions or hemorrhages in the rest of the organs.

*Case 2.* A 64 year old man was admitted to the Mount Sinai Hospital for the second time on February 5, 1952, because of severe occipital headache, increasing mental confusion, and a fluctuating state of consciousness of 13 days' duration.

The background history revealed coronary occlusion in 1948. He had recovered but had had atrial fibrillation, controlled with digitalis and quinidine. In December, 1951, he suffered a second attack of substernal pain associated with cardiac dysrhythmia. He was hospitalized at the Mount Sinai Hospital and started on anticoagulant therapy. He was discharged after four weeks (January 14, 1952) on a maintenance dose of Dicumarol. The prothrombin time was 19 seconds, the control was 14 seconds.

Prothrombin determinations were continued at home. On January 16 the prothrombin time was 29 seconds and control was 14 seconds. On January 22 the prothrombin time was 48 seconds and control was 15 seconds. On January 23 the patient complained of frontal headache. He received 100 mg. of Dicumarol the following day. Dicumarol was stopped on January 25 because of the persistent headache. The prothrombin time was now 54 seconds, control 12 seconds. On January 26, 12 days after leaving the hospital, he became irritable, mildly confused and disoriented. The mental picture fluctuated over the next week, and on February 5 a lumbar puncture done at home revealed deeply xanthochromic fluid with an initial pressure of 500 mm. H<sub>2</sub>O. After admission to the hospital, he was found to be more lethargic and grossly disoriented. There was some weakness of the left side of the face. The blood count and differential were normal. Urinalysis showed 1 plus albumin. X-rays of the skull disclosed a pineal body shift from right to left of 5 mm. A right subdural hematoma was diagnosed and surgery undertaken. Bilateral burr holes revealed a large encapsulated subdural hematoma on the right and a smaller clot on the left. After removal of the hematomas and encapsulating membranes, the underlying cerebrum was noted to be depressed, and isotonic saline was introduced via the lumbar route until the brain reexpanded. Several hours later the patient was fully conscious. A mild aphasia was then apparent. Microscopic examination of the subdural membranes revealed fibrous connective tissue containing blood pigment, phagocytes and areas of recent bleeding.

#### DISCUSSION

The relationship between Dicumarol therapy and the development of the subdural hematoma in the first case is open to challenge, since the patient

was admitted with headache and a left facial paresis. However, the clinical course and the subsequent findings of xanthochromia and then bloody spinal fluid (the initial spinal fluid having been clear and colorless) six days after Dicumarol treatment was begun cannot be ignored. In addition, the post-mortem discovery of a large, fresh subdural clot and several small parenchymal hemorrhages further supports the causal relationship to Dicumarol. The sequence of events in the second case leaves little doubt as to the part played by the anticoagulant drug.

We have no evidence of head trauma by history from the patients or from persons attending the two patients. The reliability of the history of the patient admitted to Bellevue is open to question, but the second patient, the father of a physician, had been closely attended by family, full-time nurse and physicians for at least two months prior to discovery of the subdural hematoma. Despite the lack of evidence of head trauma, we do not exclude this possibility. The term "spontaneous" in most instances merely means no recollection by the patient or family of head injury. Not infrequently, after removal of the hematoma and with the return of consciousness and orientation, the patient may recall injury to the head. At times, trauma considered "minor" is overlooked or is not recalled by the patient. With this in mind, we reluctantly classified these two case reports as "spontaneous," and submit the possibility that, under the condition of anticoagulation, or in patients with bleeding tendency as a result of blood dyscrasia, "minor trauma" to the head, easily unobserved, may very well initiate the oozing of blood that continues uncontrolled.

The number of patients now on anticoagulant therapy is great. The complications have been well documented, including nervous system involvement.<sup>2-7</sup> At the first sign of bleeding, anticoagulants commonly are discontinued and the bleeding is controlled. However, this may not be true when bleeding takes place in the subdural space. Cessation of Dicumarol therapy had no effect in altering the downhill course in case 2.

#### SUMMARY

Two patients are reported who developed subdural hematoma in relation to anticoagulation therapy. In one case the hematoma was discovered at postmortem examination, in the other relatively early in the course of the illness and successfully removed.

The need for consideration of subdural hematoma as a complication of Dicumarol treatment is emphasized whenever mental and neurologic signs develop during the course of anticoagulation.

"Trivial" or "minor" head trauma during anticoagulant therapy cannot be fully eliminated as a possible initiating factor.

#### ADDENDUM

A third patient, a 65 year old female, was admitted to the Mount Sinai Hospital on December 19, 1957, with a one-day history of severe headache, confusion and lethargy. The



background history revealed that on November 1, 1957, a phlebitis of both lower limbs was diagnosed and the patient was started on Dicumarol, 50 mg. daily. Prothrombin times were determined at varying intervals, the last known determination prior to admission having been on November 24, 1957. No information was available as to the exact prothrombin time, but it was said to have been "satisfactory," according to the family of the patient. The patient had continued to take 50 mg. of Dicumarol daily up to the day before admission.

Upon admission the patient was found to be disoriented and drowsy. There was questionable nuchal rigidity. Lumbar puncture revealed blood-tinged spinal fluid, with 40,000 crenated and fresh red blood cells. The prothrombin time was 71 seconds, as compared to the control of 12. Intravenous vitamin K oxide was started. Urine showed microscopic hematuria. Skull x-rays were normal. The pineal was not calcified. The following day the patient seemed more alert but was still markedly disoriented and confused. She continued to improve until December 22 (fourth day after admission), when she again became lethargic. A left facial weakness became apparent. The prothrombin time was now 14 seconds as compared to a control of 12. A repeat lumbar puncture the following day (December 23, 1957) revealed xanthochromic fluid. A right carotid angiogram revealed a shift of the anterior cerebral artery from left to right, and the fine peripheral branches of the right middle cerebral artery were depressed away from the inner table of the skull. This strongly indicated a bilateral subdural hematoma. Operation substantiated the angiographic findings. The day after the operation the patient was fully conscious and fairly well oriented. However, late that afternoon she again became semicomatose. She was reexplored surgically but no additional clot was found. She died on December 25, 1957. Postmortem examination did not show residual subdural clot or intracerebral hematoma.

#### SUMMARIO IN INTERLINGUA

Ben que le occurrentia de sanguination a in histos e cavitates del corpore como complication de tractamentos anticoagulante es ben cognoscite, reportos que describe le disveloppamento de hematoma subdural intracranial es paucio numerose. Le ration de iste paucitate de reportos es possibilmente a vider in le raritate del phenomeno, sed viste que hematoma subdural es facile a deteger e viste, in plus, que illo es frequentemente tractate con bon successo, le presentation de un analyse de iste complication es justificata. Le presente communication es concernite con tres casos de hematoma subdural, occurrente in association con le uso de Dicumarol, in duo del casos pro infarcimento myocardial e in le tertie pro phlebitis in le extremitates inferior. In un del casos, le morte del patiente resultava, al minus in parte, del facto que le conditiones prendite in consideration pro explicar le tableau clinic includeva diffuse sanguination parenchymal o subarachnoide sed non hematoma subdural. Del altere latere, le facto que le possibilitate de hematoma subdural esseva prendite in consideration in le altere duo casos resultava in le confirmation operatori del diagnose e, subsequentemente, in le cura de un del duo patientes.

Es presentate le casos de tres patientes (un como addendum al reporto original) qui disveloppava signos e symptomas mental e neurologic durante que illes recipeva un therapia a Dicumarol. In duo del casos il habeva indicationes de un sanguination a in le spatio subarachnoide. Le tertie revelava xanthochromia del liquido spinal. In le prime caso, le hematoma subdural esseva discoperite al necropsia. In iste caso, il etiam habeva plure areas de hemorrhagia parenchymal. In le secunde caso, le discoperta del hematoma subdural esseva effectuate durante le vita del patiente, e un operation esseva completate a bon successo. Etiam in le tertie caso, le hematoma subdural esseva discoperite durante le vita del patiente. Le hematoma esseva evacuate, sed le patiente moriva subsequentemente ab le complication additional de hemorrhagias intracerebral. In due del casos, il es ver, le tempore prothrombinic esseva marcatamente anormal (56 a 71 secundas), sed in le tertie caso ille valor nunquam excede 26 secundas, comparate con un valor de controllo de 12 secundas.

Ben que nulle historia de trauma del capite poteva esser documentate—e isto in despecto del facto que le familias del patientes, al minus in duo del tres casos, esseva digne de confidentia quanto a lor testimonio—nos non exclude completamente le

possibilitate que un minor o "trivial" trauma del capite habeva un parte in le production del tableau clinic. Assi il es con un certe reluctantia que nos classifica iste casos como hematoma subdural "spontanee." Nos asserere que un trauma "minor" del capite, de un typo que facilmente escappa al observation, es ben capace—in patients con tendentia sanguinatori ab le un o le alter causa e ergo etiam sub le conditiones de un therapia anticoagulante—a initiar un exsudation de sanguine que continua alora sin arrestation.

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## ECOLOGIC INVESTIGATIONS OF THE RELATIONSHIP BETWEEN ILLNESS, LIFE EXPERIENCES AND THE SOCIAL ENVIRONMENT \*

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By the beginning of the present decade there was enough clinical and experimental evidence to establish the fact that a man's reactions to the situations that he encounters in his daily life may affect a great number of his internal processes. In effect, it was clear that any bodily function subject to the regulation of the central nervous system might be influenced to a significant degree, and that the regulatory influences of the central nervous system might be mediated directly by way of the neural pathways or internal secretions, or indirectly by way of changes in the over-all behavior of the individual. The effects of these, taken together, might lead to notable variations in general activity, energy expenditure, food and fluid intake, sleep patterns and the like, and to important changes in the specific demands made upon various organ systems, especially when such systems are involuntarily involved in reaction patterns not directly appropriate to the adaptation which the organism is attempting to make. In short, there was a sound theoretic and experimental basis to support the very old clinical observation that disease may wax and wane according to the moods and fortunes of the patient.

On the other hand, the extent to which such adaptive reactions are involved in disease in general, and the degree to which they determine the health of the individual, remained to be established. It was in an attempt to answer some of the questions in this area that the studies of the relation between human health and human ecology which formed the basis for this report were undertaken. Up to the present time, those engaged in these studies have investigated the illness patterns of more than 3,000 people drawn from the ambulatory population. The subjects fall into five population groups (table 1), each relatively homogeneous in certain important respects, and each selected because it presented an opportunity for answering questions pertinent to the over-all investigation.

The two American working groups, for example, were of great value

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because of their long-term, unbroken, comprehensive records of health, attendance, and performance at work. They were also remarkably homogeneous with respect to many characteristics of their members and the environment in which they had lived. Most of these American workers had spent their young adult lives in a social milieu that did not undergo dramatic change. Among these people, therefore, individual life experiences were a prominent variable. The Chinese, by contrast, were people who had spent their lives in a milieu that was undergoing dramatic social and cultural

TABLE 1

## The People Studied

1. 1,700 semiskilled American working women.
2. 1,527 skilled American working men.
3. 100 Chinese graduate students and professional people.
4. 76 Hungarian refugees.
5. 132 recent graduates of American colleges.

change, and their individual experiences included a variety of geographic, political and economic dislocations, as well as difficulties arising from interpersonal relations. This group allowed one to study the effects of notable changes in the milieu of individuals of an ethnic and cultural background different from our own. The American college graduates and the Hungarian refugees were people with still different sets of characteristics and experiences, throwing light on a number of other points of interest.

These studies have been carried out through the collaborative efforts of investigators from the medical, biologic and social sciences. Data relating

TABLE 2

## Methods

Data on health were derived from:

1. Analysis of comprehensive medical records, covering repeated observations over periods as long as 25 years.
2. Analysis of comprehensive attendance and personnel records covering similar periods.
3. Reports of private physicians and hospitals.
4. Detailed medical histories (by internists).
5. Direct observations of health patterns.
6. Physical examinations.
7. Laboratory diagnostic procedures.
8. Psychiatric interviews.
9. Psychologic tests.

to health have been derived from a number of sources, and much effort has been expended in an attempt to assure that they reflect as accurately as possible the health patterns of the people who were studied (table 2). The findings have been consistent, regardless of the method used, and information derived from one source has been confirmed by that derived independently from other sources. Data relating to the physical and psychologic characteristics of the individual, his social, cultural and familial background, his development and his life experiences were obtained by the extensive and independent efforts of investigators from several of the disci-



TABLE 3

## Methods

Data on background, life experiences and social environment were derived from:

1. Family histories
  2. Detailed biographies
  3. Interviews with cultural anthropologist
  4. Interviews with sociologist
  5. Interviews with psychiatrist
  6. Psychologic tests (Rorschach, Wechsler-Bellevue, thematic apperception, projective questionnaire, sentence completion, and others).
  7. Reports of family, associates and employers.
  8. Observations of behavior.
- } By internists, psychiatrists, and sociologists  
} two to four hours each

## DISTRIBUTION OF EPISODES BY QUARTILES

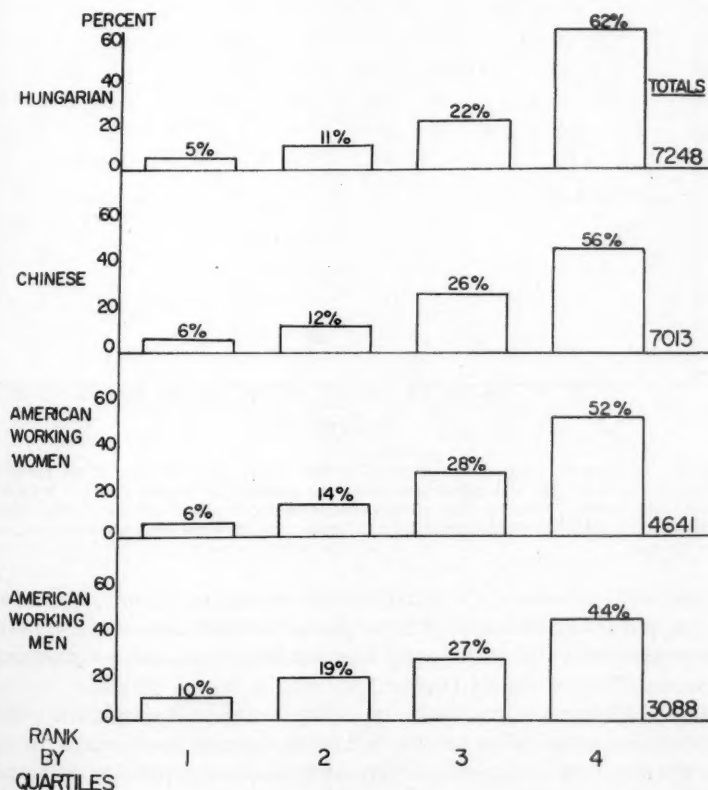


FIG. 1. In each population group, 25% of the individuals experienced approximately 50% of all episodes of illness that occurred among members during a 20-year period of young adult life. Another 25% of the individuals experienced less than 10% of the episodes.

plines, involving many hours of study of those informants who were selected for intensive investigation (table 3). These data likewise are consistent from one source to another and, in some instances, are buttressed by pre-existing records.

Episodes of illness were not distributed at random among the members of any of these groups.<sup>1</sup> In each group, during two decades of young adult life, one fourth of the individuals had experienced approximately one-half of all of the episodes of illness that had occurred among all of the people.

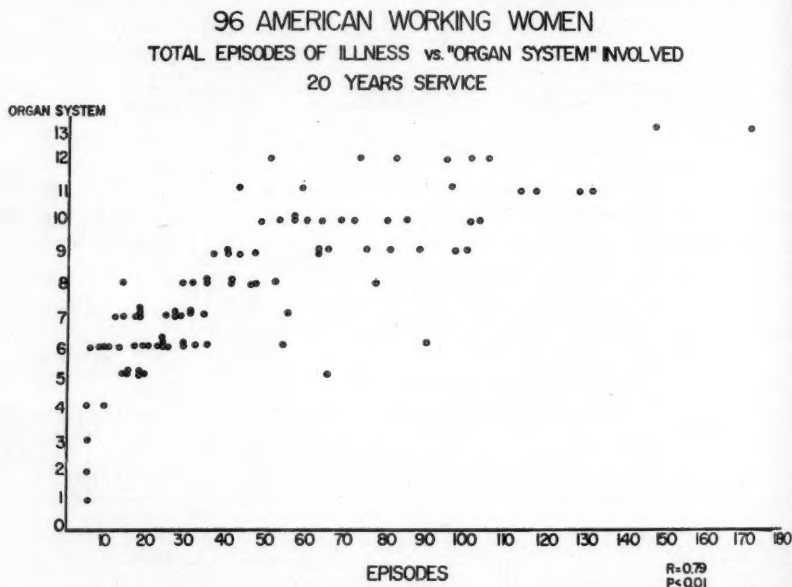


FIG. 2. Differences in general susceptibility to illness. As the number of episodes of illness experienced by the individual increases, the number of organ systems involved in disease increases also. Example drawn from the intensive study of 20-year health histories of 96 young adult American working women. Similar results were obtained from the studies of other groups.

The distributions were such that they can be explained only by assuming that some factor in addition to chance operates to determine them.<sup>2</sup> In other words, the members of each group behaved as if there were differences in their susceptibility to illness (figure 1).

These differences in susceptibility to illness were not simply the result of differences in susceptibility to one or another specific syndrome. In every group the members displayed a difference in their susceptibility to illness in general, regardless of its type, or of the causal agents apparently involved. Thus, as the number of episodes of illness experienced by an individual increased, the number of different types of disease syndromes that he exhibited

increased also. Although a great many of these syndromes might involve one or two organ systems, episodes of illness were not limited to a few systems; instead, as the number of episodes of illness experienced by an individual increased, the number of his organ systems involved in disease increased also (figure 2). Likewise, as the number of episodes he experienced increased, he exhibited illnesses of an increasing variety of etiologies (figure 3). He was likely to have more "major," irreversible and life-endangering illnesses, as well as more "minor," reversible and transient ill-

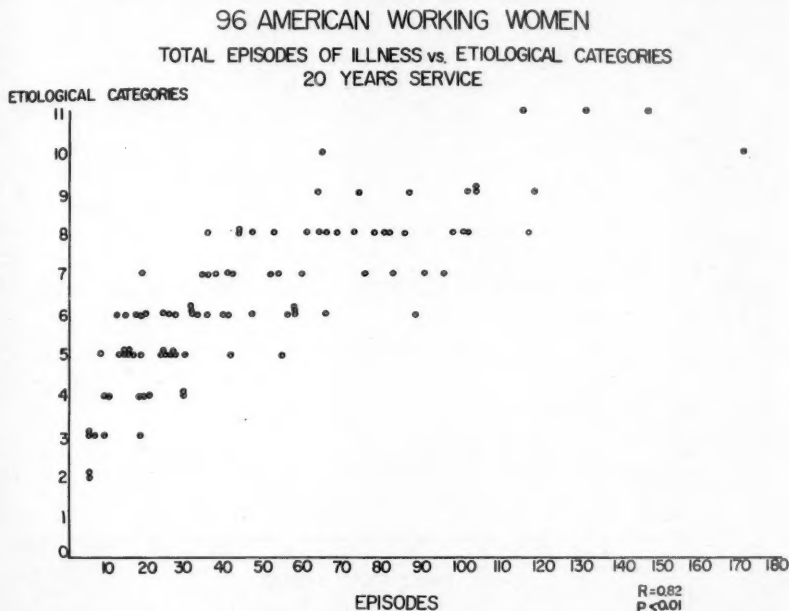


FIG. 3. Differences in general susceptibility to illness. As the number of episodes of illness experienced increases, the individual exhibits illnesses of an increasing number of etiologies. Example drawn from the study of American working women. Similar results were obtained from the studies of other groups.

nesses. Finally, as the number of his "bodily" illnesses increased, the number of his "emotional disturbances" and "psychoneurotic" and psychotic manifestations (here categorized as "disturbances of mood, thought and behavior") usually increased also.

These findings have been obtained consistently in each of these five groups, regardless of the sex, race, culture, economic or social background, environment or life experiences of the people studied. They are most reasonably explained by assuming that they are dependent upon factors operating within the individual, influencing the ease, the frequency and the degree to which he responds to the great variety of other factors known to be capable

of causing disease. The relative constancy of individual illness patterns in the two groups of American working people<sup>2</sup> lends support to this hypothesis (figure 4), and, incidentally, indicates that the illness patterns of these people were relatively little influenced by the therapeutic efforts of the physicians who treated them.

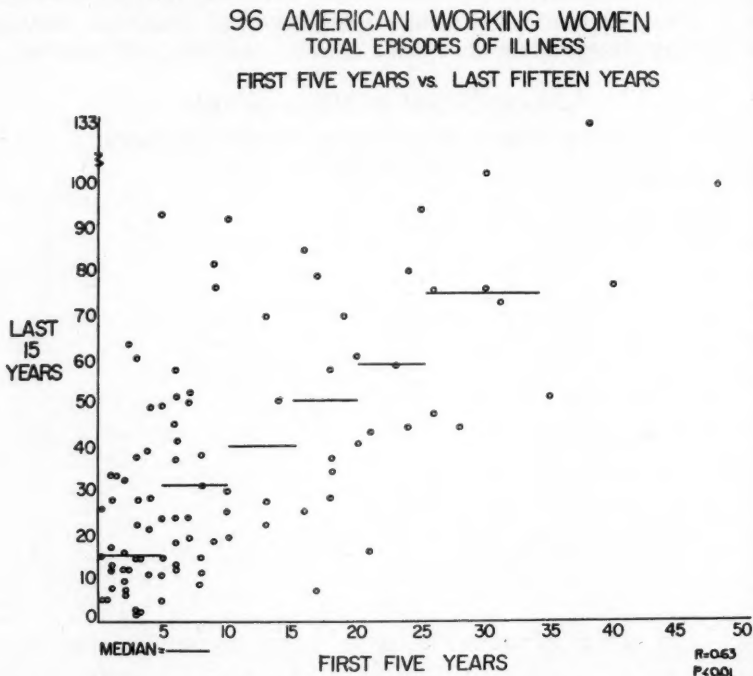


FIG. 4. The illness episode rate of an individual during the last 15 years of observation tends to be like his rate during the first five years. Example drawn from the study of American working women. Similar results were obtained from the studies of other groups.

If one examines the illness patterns of men and women over many years of their adult lives, one finds that each person has a rather consistent mean rate of illness episodes, around which his annual rate fluctuates. However, from time to time there occur peak periods, usually of several years' duration, during which the episode rate may be much higher (figure 5). We have called such peak periods "clusters" of illness episodes. If one arbitrarily defines a "cluster year" as a year during which the episode rate for disabling illnesses is 1.75 or more times as great as the mean rate for the individual over the entire observation period, one finds that, in those people who show the phenomenon of "clustering," about one eighth of the years are "cluster years," and that about one third of each person's illnesses occur during such



years (figure 6). This mathematical device does not, however, completely define the phenomenon of clustering. As may be seen in figure 5, each "cluster year" is often surrounded by other years when the rate is almost as high, and illness episodes altogether have a more distinct tendency to group themselves during limited periods of years than the simple figures indicate. These periods occur at no fixed time of life, and have no fixed duration. In the American groups, "clusters" were more frequent but relatively small and of short duration, and the individual was not likely to deviate greatly

### AMERICAN WORKING WOMEN "CLUSTERING" OF ILLNESS

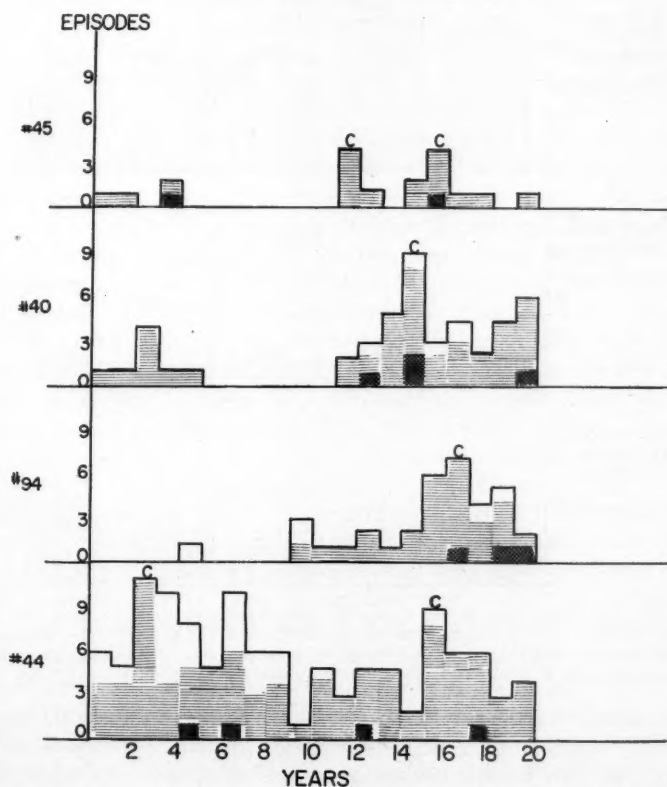


FIG. 5. Twenty-year health patterns of four women, drawn at random from the American group. Black squares are "major" disabling illnesses. Crosshatched squares are "minor" disabling illnesses. Open squares are "minor" illnesses not causing disability but serious enough to require medical attention.

The illness rate of woman No. 45 tends to be low; that of No. 44 tends to be high. "Clusters" of illness occur in the adult life of each woman. "Cluster years" are marked "C" (see text). "Clusters" are determined on the basis of disabling illnesses.

from his mean episode rate. This was reflected in the constancy of illness patterns among the members of these groups, which we have just discussed. Among the Chinese and Hungarians, clusters were less frequent but often were of much greater magnitude and duration, and individual illness patterns were somewhat less predictable over a 20-year period.

### "CLUSTERING" OF ILLNESS EPISODES

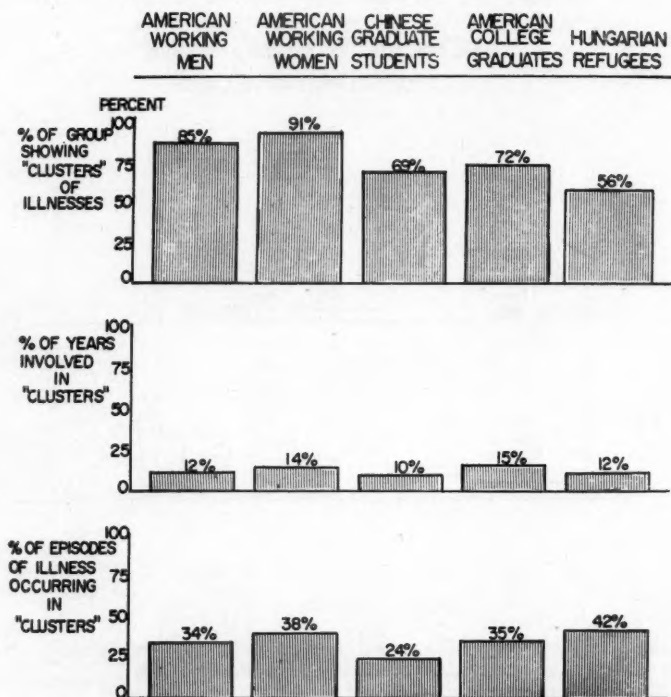


FIG. 6. The occurrence of the clustering phenomenon in the five population groups. From 56% to 91% of the individuals in each group exhibit this phenomenon. Illnesses were distributed over the adult lives of these people in a manner such that slightly more than one third of all episodes of illness occurred in approximately one eighth of the years.

Examination of these "clusters" of illness episodes reveals that they are not usually made up of a single syndrome which recurs over a period of time; nor do they usually consist of a "major" illness and other illnesses which are commonly thought of as its complications or sequelae. These phenomena, of course, do occur and do account for a significant proportion of the clustering phenomenon. But the usual cluster is made up of several different and ostensibly unrelated syndromes of different degrees of severity, often arising from several etiologic sources that have no evident relation

to each other. This finding also is consistent among the members of every group that has been studied. The individuals in every group behave as if there are periods in their lives during which their susceptibility to illness in general is increased. These periods occur at no special time of adult life, and have no specific duration or magnitude—they occur as if they were the result of something which might happen to an individual at any time during his adult life, and which might last for any length of time.

Coincident with the studies of the illness patterns of these people, the investigation of their environments and life experiences was carried out.<sup>3, 4</sup> The data were recorded independently of those relating to illness. Detailed, chronologically arranged biographic descriptions of each person were obtained, outlining as comprehensively as possible the total milieu in which he operated during each period of his life. Due attention was given to such factors as occupation, activity, sleep, rest, diet, and exposure to infection, trauma and toxic materials, as well as to the people, events and social environment which he encountered, and his reaction to these. The limitations on these data are those which limit any painstaking, detailed, historical data obtained independently by a number of skilled investigators, working with intelligent and coöperative subjects. In some instances the data were obtained in a "double-blind" fashion—neither the history taker nor the subject knew the final purpose for which they were being sought. In nearly all instances the subjects were unaware of the purpose of this aspect of the history taking. In the two American working groups, records and direct observations were available for some of the subjects. The whole body of data is consistent throughout the five groups. The findings of observers of different disciplines, working independently, support each other, as do records and direct observations where these are available.

It was evident that some clusters of illness were the result of phenomena well known to influence human susceptibility to illness. Thus a Chinese who, during the period from 1937 to 1942, fled from Peking to a provincial town in a malarious area of southwest China might develop recurrent bouts of malaria, recurrent diarrhea (including a severe episode of illness with the clinical characteristics of cholera), malnutrition, and active tuberculosis. Later, upon his return to his home in the city, his health might improve greatly. Similarly, a Hungarian, seized by the AVH in 1949 and imprisoned until 1952, beaten, underfed, overworked, and exposed to the elements during this time, might have had several bouts of pneumonia, severe dental caries, and a disease with the clinical characteristics of rheumatic fever, during his imprisonment. An American working man who became alcoholic might develop cirrhosis, malnutrition and esophageal varices, and have a number of accidents. Such stories were not unexpected, and occasioned no surprise; but phenomena such as these accounted for only a small proportion of the clusters of illness that were observed in any group. It was much more common to observe that peak periods of illness occurred in

the absence of any significant change in activity, diet, or exposure to infection, trauma, toxic materials or other physical aspects of the environment (figure 7).

The great majority of the clusters of illness episodes that occurred in the lives of the members of every group occurred at times when they perceived their life situations to be unsatisfying, threatening, overdemanding,

### AMERICAN WORKING MAN

#### RELATION BETWEEN LIFE SITUATIONS AND CLUSTERS OF ILLNESS

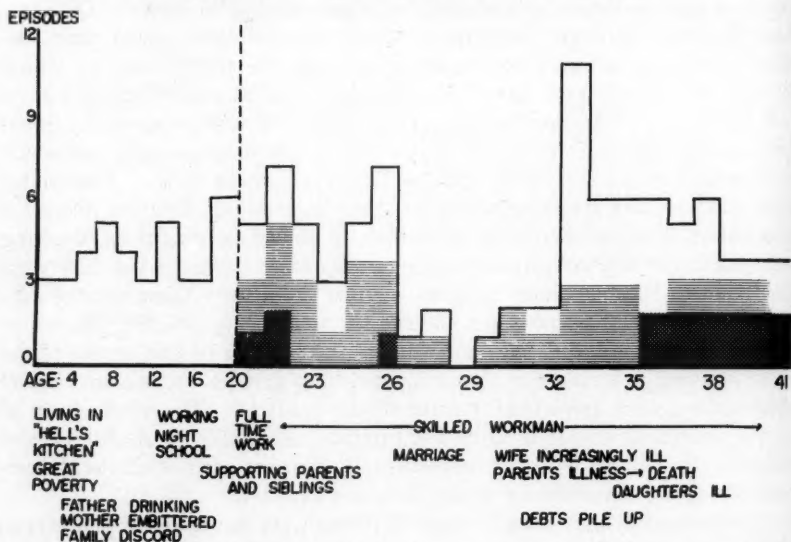


FIG. 7. An example taken from the study of American working men. Two peak periods of illness occurred during this man's adult life. The first, from age 20 to 26, included two episodes of lobar pneumonia, acute appendicitis, thrombophlebitis, two inguinal hernias, mumps, many minor respiratory infections, recurrent lower bowel symptoms ("irritable colon" syndrome), and severe dental caries. The second cluster, extending from age 32 to 41, included coronary artery disease with angina pectoris, a moderately severe agitated depression, and the recurrence of the respiratory infections and of lower bowel symptoms.

These two clusters were temporally associated with changes in the informant's life situation. As a young man he worked his way out of a difficult home environment to attain a secure economic position, and occupational and marital satisfaction, by the age of 26. Deterioration of his life situation, brought about by illness of his wife, two daughters and parents, was associated with a marked recrudescence of illness.

and productive of conflict, and they could make no satisfactory adaptation to these situations. The situations were, in general, those which arose out of disturbed relations with family members and important associates, threats to security and status, and restrictions and limitations which made it impossible to satisfy important needs and drives.

The documentation of this observation requires some preliminary ex-



planation. Whereas man interacts with some aspects of his physical environment through direct energy interchanges, and by the ingestion or absorption of various substances, he interacts with his "social" and "interpersonal" environment in a manner quite different. With few exceptions, this aspect of his environment does not impinge upon him at all. He interacts with it by means of a communication system, picking up "signals" from it, largely by means of his eyes and ears, and reacting to these signals upon the basis of what they mean to him. Thus a man reacts to his life situation not necessarily as an outside observer evaluates this situation, but as he himself perceives it.

The relevant variable with regard to man's reaction to his social environment and life experiences, therefore, is not the "actual" environment and the "actual" experiences themselves, but the subject's perceptions of these. The term "perceive," as here used, is taken to mean all of those processes that go on within an individual which involve the receiving and evaluation of information. Many of these processes take place quite outside of his awareness. In the present state of our understanding, one is far from being able to define all of the factors which will determine how a given individual will perceive and react to a given situation. However, the broad general categories into which these determinants will fall are readily defined. A man's perception of his life situation must be a function of his genetic or "constitutional" endowment, plus his acquired characteristics: his cultural and social background, the sum total of the effects of all of his past life experiences, and the information available to him about the situation in which he is involved. This is not the same thing as defining what his perception of his life situation will be, but it does indicate the general areas in which data must be sought if one is to make an estimate of this perception. Such considerations governed the design of the data-gathering efforts in these studies.

There being no "objective" measure of the way that a man perceives his environment, one must depend upon the best estimates of trained observers, who attempt to synthesize the information available from all of the areas that have just been mentioned. Although cumbersome, the procedure is less difficult than one might imagine. It requires no great sophistication to estimate that an ambitious Hungarian economist, ousted from his job for political reasons, forced to perform maddeningly dull work as a clerk, under surveillance by the AVH, his children deprived of their right to an education, and his wife forced to work as a chambermaid, perceives his life situation as unsatisfactory, even though his diet is adequate, his occupation is not hazardous, and he is no more exposed to infection, trauma or toxic materials than when he taught at the University. The same may be said of a 35 year old American housewife whose husband develops a chronic illness, and who finds herself forced to keep a house, to raise and care for two small children, and to nurse an ill husband, while working full time at

a job in order to support them all. Observers generally agree in their estimates of the subjects' perceptions of such situations. Given the large body of data available about each subject, even less dramatic situations, and those which on first glance appear to be less clear-cut, are not a great deal more difficult to estimate.

In one study, carried out in our laboratories by Dr. W. N. Christenson, the following procedure was utilized: from all of the data on 68 subjects, all of the information relating to health and illness was removed. This was given to a medical statistician who received no other information about the subjects. Using a prearranged, standardized procedure used in all of these studies, she calculated the annual illness episode rates for each subject, and placed the episodes in their proper categories. All of the remaining data on each subject, representing the findings of the anthropologist, sociologist, psychiatrist and psychologist, the reports of associates and other observers, the biographic statements, and those portions of the medical data not describing illness (reports of nonmedical experiences, occupations, activities, etc.), were transcribed in toto. All of this information was given to three new observers, who knew nothing of the illness episode rates, or of other details of the medical history. Each of these three, working independently with all of the information, was asked to score the subject's perception of his life situation and his ability to make an adequate adaptation to it, on a five-point scale from "highly satisfactory" to "highly unsatisfactory."<sup>8</sup>

Altogether, 1,234 years of the lives of these 68 subjects were scored by the three. The number of possible combinations of choices was over 150,000. The ratings of the three observers coincided with each other to a degree far beyond chance ("P" is very small and approaches zero for this degree of coincidence). This provided confidence that the three observers were making their estimates upon a similar basis, and that this was related to the data provided to them.

After the estimates were received, the mean of the three for each year was taken. It was plotted against the independently derived episode rate of the individual for that year. From this it was determined that the illness episode rates of all of these people were significantly higher during those years when the observers estimated that they had perceived their total life situations as unsatisfactory, and that they could make no adequate adaptation. Statistical tests of significance indicate that this finding is reliable well beyond the 1% level of probability.

Other findings, from other aspects of the studies, support the observations just described. They indicate also that those who have the highest illness episode rates, and who show the highest susceptibility to illness in general, are those who perceive their total environment to be most unsatisfactory, and who experience the greatest difficulty in adapting to it; and this feature, likewise, seems to be independent of sex, age, race, and cultural or social background.<sup>9</sup>

## COMMENT AND CONCLUSION

When one brings together the information derived from this considerable number of people, of such diverse background and experience, one can scarcely escape the conclusion that, whoever a man may be, and whatever may happen to him, the way that he perceives his life situation and reacts to it is an important determinant of his health. It is a reasonable estimate that at least one third of all the illness episodes that occurred among these people were influenced in their time of occurrence, or in their course, by the attempts of the individual to adapt to the events and situations that he encountered. This estimate is based upon the occurrence of "clusters" of episodes and their demonstrated relation to life experiences. Probably one should add to this the evidence that people with a consistently high illness rate experienced a majority of all of the episodes that occurred among the group, because such consistently high rates of illness are at least in part based upon a continuing inability of the individual to make an adequate adaptation to his milieu. When this additional point is considered, it becomes likely that efforts to adapt to the social environment are to some degree involved in the majority of all of the illness episodes that occur among the adult population.

That the state of the host is one of the determinants of the occurrence of illness is, of course, axiomatic in medicine. The observation that exposure, overactivity, extreme fatigue and other periods of physiologic disturbance may facilitate the occurrence of disease, or adversely affect its course, is as old as recorded medical lore. However, it is perhaps not generally appreciated that the state of the host is an important determinant of so large a proportion of illness episodes, and that a man's susceptibility to illness during adult life is to such a large degree influenced by his relation to the society in which he lives and the people in it. Yet this is not unreasonable. It has been pointed out that in the course of adaptive reactions any bodily function subject to the regulation of the central nervous system might be influenced to a significant degree and that the regulatory influence of the central nervous system might be mediated directly by way of any of the nervous pathways or internal secretions, or indirectly through changes in the over-all behavior of the individual. This physiologic arrangement quite clearly carries with it the possibility that any disease process may be influenced to some extent; and the observations indicate that this does, in fact, happen. There seem to be no categories of illness that are immune to physiologic influences of this sort, and there is no theoretic reason why there should be. Evidently all illness is to some extent affected by the way that men perceive their life situations and react to them.

Obviously, some illnesses are influenced in this manner much more readily and to a much greater degree than others. Illnesses so easily influenced are well known, and some of them, such as peptic ulcer and asthma, have

been called "psychosomatic." But these studies yielded no evidence to support the idea that there is any special category of diseases which should be designated by this term. So far as these data are concerned, there need be no qualitative difference between peptic ulcer, typhoid fever, carcinoma of the breast and gout in the way that these diseases are related to the patient's general adaptation. Whatever difference is present appears to be only quantitative, in that peptic ulcer appears to be more readily, more frequently and to a greater extent influenced in its course by the physiologic effects of such adaptations.

Every syndrome has multiple causes in the sense that a number of conditions must be met before it can appear. Some of these necessary conditions are arbitrarily defined as such. The pneumococcus is, by definition, a necessary condition to the appearance of pneumococcal pneumonia, even though other bacteria can be involved in syndromes very much like pneumococcal pneumonia. Many factors, in addition to the presence of the pneumococcus, determine the other conditions necessary to the appearance of the pneumonia. Physiologic changes brought about during adaptations to life situations—probably affecting bronchial and pulmonary function, antibacterial defense mechanisms, and perhaps many other aspects of the host—seem to be among the factors helping to determine the occurrence of an episode of pneumococcal pneumonia.

The only illnesses in which a disturbance of the adaptation of the individual to his social environment is, by definition, a necessary condition, lie in that category which we have defined as disturbances of mood, thought and behavior—"sociopathic" or "psychopathic" behavior and perhaps some of the psychoneuroses and psychoses. The physiologic effects of adaptive efforts, successful or unsuccessful, influence the great majority of syndromes of all sorts, some to a great degree and some very little, and have a role in determining the conditions under which they will appear; but they are not by definition a necessary condition in themselves. Granted that a large proportion of the exacerbations of peptic ulcer appear primarily as a part of a response to a life situation, nevertheless such exacerbations may also be brought about by extensive burns or by the administration of corticosteroids. Granted likewise that the conditions necessary for the appearance of a fibrosarcoma in a man are largely independent of his relation to the society in which he lives, nevertheless there is no theoretic reason why his hormonal response to a profound disturbance of this relation might not affect the rate of growth of his tumor. Nor is there any inevitable connection between emotions and bodily disease, even when the relation of the subject to his social environment is highly pertinent to the course of the disease. Adaptive reactions, integrated at high levels of brain function, and influencing bodily processes to a major degree, may not be associated with any outward evidence of emotional or behavioral disturbance. It has been observed consistently during these studies that bodily illnesses and disturbances of mood, thought, and behavior do often occur together, but



that there appears to be no causal connection between them; it seems rather that both are a part of the response of the man to his total milieu, internal as well as external, at a given time.

The evidence indicates that the reaction of a man to his life situation has an influence upon all forms of illness, and that it plays a role of significance in at least one third of all episodes of disease, regardless of their nature or location, their cause or their severity. Ultimately medicine will have to take account of this in the treatment of illness. It is very probable that an increasing proportion of the therapeutic effort will have to be directed at the patient's relation to his environment if we wish to make any significant improvement in his health. In view of the complexities involved in dealing with human relationships, human attitudes and human behavior, and the ineffectiveness of our present methods of dealing with these, it is also very probable that these efforts will be difficult, time-consuming and not, at first, highly rewarding. The problem stands before us as a stern challenge to medicine, and not as an easy opportunity.

#### SUMMARY IN INTERLINGUA

Le presente reporto se basa super sex annos de investigationes del natura e del distribution del maladies de omne typos que occurreva inter le membros de cinque grupos del population e del relationes inter le configuration del maladies de individuos, lor experientias vital, e lor milieu social e physic. Esseva investigate (1) 1297 obreras american, (2) 1527 qualificate obreros american, (3) 100 chineze studentes universitari e personas professional, (4) 75 refugiatos hungare, e (5) 130 recente diplomatos de collegio american. Le investigation consisteva del scrutation o effectuation de (1) le complete disponibile documentation sanitari, (2) historias medical e examines medical, (3) interviews psychiatric. (4) observationes sociologic, e (5) tests psychologic.

In omne gruppo individual, le subjectos con le plus grande numero de episodios de maladia per unitate de tempore (inter le etates de 12 e 45 annos) exhibiva un plus grande numero de syndromes clinic (major e minor) que concerneva un plus grande numero de systemas organic e representava un plus grande numero de categorias etiologic.

In omne gruppo individual, le subjectos plus frequentemente malade differeva ab le subjectos minus frequentemente malade in lor bases genetic, in lor tractos characterologic, e in lor maniera de reguardar e evaluar lor experientias vital e lor milieu social, sed le duo grupos non differeva grandemente in le factos real de lor experientias e de lor milieu.

Circa un tertio del membros de omne gruppo individual habeva experientiate periodos de un a plure annos de durantia quando illes habeva habite un augmentate numero de maladies de varie formas. Un grande numero de iste "cumulos de maladies" coincideva con periodos de adaptation a nove e exigente experientias vital.

Le grupos differeva le unes ab le alteres tanto in le natura como etiam in le incidentia del maladies experientiate per lor membros. Iste facto pote esser interpretate como resultado de lor effortio de adaptar se a lor milieu social e etiam como effecto de lor milieu physic.

Le datos indica que il existe differentias inter le homines in lor susceptibilitate general de contraher maladies. Le datos suggere que le processos del adaptation al milieu social e del adaptation a experientias vital individual exerce un importante influencia super le occurrentia de omne typos de maladia.



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# CLINICAL-PATHOLOGICAL CONFERENCE

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## ACROMEGALY, JEJUNAL ULCERS AND HYPERSECRETION OF GASTRIC JUICE: CLINICAL-PATHOLOGICAL CONFERENCE AT THE NATIONAL INSTITUTES OF HEALTH \*

*Moderator:* CHARLES G. ZUBROD, M.D. *Discussants:* WILLIAM PIEPER, M.D.,  
Chicago, Illinois, T. F. HILBISH, M.D., ROBERT SMITH, M.D., THOMAS  
DUTCHER, M.D., Bethesda, Maryland, and PAUL WERMER, M.D.,  
New York, N. Y.

DR. CHARLES G. ZUBROD: The presentation today, we hope, will be a contribution to our understanding of why tumors produce some of the effects they do. Dr. William Pieper, of the National Cancer Institute, will present the case.

DR. WILLIAM PIEPER: This 45 year old male was first admitted to the Clinical Center in April, 1957, with acute complaints of recurrent abdominal pain, nausea and vomiting. History revealed that the patient was a known acromegalic giant (noted at age 16) who underwent pituitary radiation and partial hypophysectomy in 1947 at age 35 because of almost total blindness. His vision improved markedly following surgery, with only a partial right inferior nasal defect persisting for the remainder of his life. In 1949 he began to notice a decrease in seminal flow and ejaculation, and in 1952 he became completely impotent; this was associated with a concomitant onset of weakness.

The patient's acute illness started in November, 1956. He began to experience persistent anorexia, nausea, vomiting and epigastric pain, and he passed occasional tarry stools. There was never any hematemesis. No specific lesion could be diagnosed. He was placed on a bland diet and antispasmodics, and was discharged as improved.

During the next three and one-half months the patient's original acute gastrointestinal symptoms returned, except for the tarry stools.

Family history was significant in that the patient's father was six feet three inches tall, and died at age 54 of "cancer of the throat." His mother is living and well at age 70, and is five feet 11 inches tall.

The patient has one sister who is living, and who is six feet tall and has three children. The patient's one brother, who was killed in World War II, was six feet six inches tall, and was considered to be "normal." To the patient's knowledge, no blood relation had had either gigantism or acromegaly. System review revealed a classic history of acromegalic gigantism, and also that in 1944 a stone

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had been removed from the left renal hilus and that he had passed three renal stones during the remainder of that year. Aside from nocturia once or twice for several years prior to admission to this hospital, he denied any other history of urinary tract disease. Finally, the patient denied any cold intolerance, change in sweating pattern, salt craving, polydipsia, polyuria or glycosuria.

Physical examination on admission revealed a "large, raw-boned, well-nourished, 'overdeveloped' white male who had the classical features of acromegaly and gigantism, and while perhaps bearing some general earmarks of chronic illness, did not appear to be in acute distress." Blood pressure was 110/60 mm. of Hg; pulse was 92 and irregular; respirations were 16. His weight was 112 Kg.; height, six feet eight inches. Remaining significant physical findings were: no thyromegaly or abnormal masses palpable in the neck; thorax and lungs had an acromegalic emphysematous contour and were clear on examination; cardiovascular system examination was negative except for compensated premature systoles. The abdomen was scaphoid in contour, soft and lax; there were no areas of tenderness, rebound, guarding or spasm. Liver, spleen and kidneys were not palpable, and no abnormal masses were felt. Rectal examination was normal; Murphy's punch was positive on the left; the testicles were markedly atrophic, and the penis was of normal size.

Admission laboratory examinations revealed a hemoglobin of 10.5 gm., with normal white count and differential. Urinalysis revealed many white blood cells and a 3 plus Sulkowitch test. The blood urea nitrogen on admission was 12; cholesterol, 141. On admission, calcium was 10.6 mg., with a phosphorus of 3.5; normal serum electrolytes and total protein of 4.6 gm.%, with the albumin being 2.1 and the globulin, 2.5. Liver tests were essentially normal. Chest x-ray revealed emphysema and two round lesions were noted inferior to the left hilum. Remaining x-rays showed signs of acromegaly. Twenty-four hour urine 17-ketosteroids were 3.5 and 7.6 mg. on two consecutive days, and urine 17-hydroxycorticoids were 8.6 and 15 mg. on two consecutive days. Blood corticoid was 12 and 16.9 gamma % on two occasions. Protein-bound iodine was 4.6 gamma %, and radioactive iodine uptake was 6%. The gonadotropin titer was between 30 and 100 international mouse units per 24 hours. An electroencephalogram revealed a diffuse dysrhythmia. Serum electrophoresis revealed no qualitative abnormality.

After admission the symptoms and signs of upper intestinal obstruction persisted, with 24-hour gastric suction exceeding 10 L. per 24 hours on many days. The pH of the gastric aspirate was consistently in the range of 1.5, and on the average contained 11 mEq. of potassium per liter, 60 mEq. of sodium, 140 mEq. of chloride, and was guaiac-positive at times. The gastrointestinal series was reported as showing partial obstruction of the third portion of the duodenum.

A laparotomy was performed May 3, 1957, and adhesions with an internal hernia producing obstruction and a benign jejunal ulcer were discovered and corrected by wedge resection. In addition, marked visceromegaly was noted.

At the time of operation the patient was placed on cortisone and tri-iodothyronine. After much adjustment, the final daily doses of each drug during the first hospitalization were 50 mg. and 25  $\mu$ g, respectively. Postoperatively the patient's abdomen remained silent a long time, and copious amounts of gastric aspirate were obtained, ranging in volume from 15 to 18 L. per day.

The gastric fluid had the same characteristics as those described preoperatively.

Through the first hospitalization, serum calciums ranged between 9.6 and 11.9 mg.%; serum phosphorus, between 3.5 and 1.3 mg.%, with alkaline phosphatase ranging between 2.7 and 3.8 units. Urinary 24-hour calciums on a 200 mg. calcium diet varied between 140 and 560 mg. for 24 hours. When the patient was on 50 mg. of cortisone, skin tests for coccidioidin, histoplasmin and first-strength tuberculin were negative. Sputum smears were negative for acid-fast bacilli, and sputum cytology studies were negative.

Two weeks postoperatively, bowel function slowly returned and the patient regained some of his strength. He was discharged June 6, 1957, on cortisone, tri-iodothyronine, androgen and an ulcer regimen.

On June 13, 1957, the patient became severely nauseated, began to vomit green material, and was promptly re-admitted to the hospital. On re-admission, physical examination revealed a healed abdominal scar in addition to the findings listed on the previous admission. For the next week the patient persisted in showing symptoms and signs of high intestinal obstruction, and the gastric 24-hour aspirate again reached levels of 13 L. per day, with the same characteristics as before. Cortisone was continued after admission, but tri-iodothyronine and androgen were stopped. Barium swallow revealed almost complete obstruction of the third portion of the duodenum. A laparotomy was performed on June 20, 1957. During that operation, exploration revealed poor wound healing of the previous operation, an acute duodenal ulcer in the first portion of the duodenum, enlarged nodes impinging on the duodenum and producing obstruction in the region of the origin of the superior mesenteric artery, and a nodule of tissue in the area of the head and neck of the pancreas. Biopsies of the nodes and a 70% subtotal gastrectomy with an antecolic gastric jejunostomy were performed. Postoperatively, the cortisone was continued, and tri-iodothyronine and testosterone were reinstituted.

During the next 10 days the patient gradually improved. On July 2, 1957, the Levine tube was removed and a very intensive ulcer regimen was started, supplemented by intravenous fluids. Cortisone was stopped on July 6, 1957, with no untoward effects, and on July 8 the tri-iodothyronine was discontinued. Despite some clinical improvement the patient became severely depressed, ate poorly, and complained of marked anorexia. Thus he had only 10 consecutive days of fairly adequate ulcer therapy. During this second and final hospitalization the patient's chemistries revealed essentially the same pattern as during the first hospital stay, and 10 days after discontinuing the cortisone the blood corticoid level was normal.

On July 21, 1957, three days after his gastric resection and 79 days after his first operation, the patient vomited 150 c.c. of coffee-ground material that was guaiac-positive. During the next four days, 500 to 3,000 c.c. per day of the same type of material, with a pH of 1.5, were obtained via gastric tube.

On July 25, 1957, a third laparotomy was performed and a total gastrectomy, followed by esophagojejunostomy and jejunojejunostomy, was done. There were marked fat necrosis and evidence of penetrating ulcers around the site of the gastrojejunostomy.

Postoperatively the patient seemingly did well for two days, but quickly deteriorated over the next few days and died on July 31, 1957.

DR. CHARLES G. ZUBROD: Dr. T. F. Hilbish will present the radiologic findings.

DR. T. F. HILBISH: The lateral x-ray of the skull demonstrates a markedly enlarged sella. It also shows a defect in the frontal bone. This patient had had a craniotomy prior to this study. The sella is much larger than is usually seen in most acromegalics.

One film selected from several gastrointestinal series shows the gross coarsening, irregularity and thickening of the mucosal folds of the duodenum. Parenthetically, I might state that every time this patient underwent fluoroscopic examination, tremendous quantities of fluid in his stomach had to be aspirated. The duodenum was grossly distorted, with great coarsening and thickening of the mucosal folds indicative of inflammatory disease.

Another interesting radiologic finding in this particular case was the lesion located in the retrocardiac position. This lesion was present at the time the patient was admitted and gradually increased in size. The lateral chest film clearly shows the lesion to be located posteriorly on the left in retrocardiac position.

One of the other roentgen manifestations of importance was the lack of calcification of the bony structures. This patient showed areas of decreased bone density here and there throughout his skeleton. A film of the mandible indicates definite deossification, and the lamina dura has largely disappeared. The bony structures in his hand, for example, show definite deossification. The long bones are rarefied, and there are cystic areas of radiolucency.

In summary, this patient demonstrated radiologic findings of an acromegalic, namely, a tremendous sella, with huge frontal sinuses and large mandible. He had large hands, with increase in tufting of terminal phalanges and gross enlargement of various organs of the body. He also presented evidence of deossification of the bony structures compatible with hyperparathyroidism. Furthermore, he had lesions in the lung field which were sharply circumscribed and, from a radiologic standpoint, had the appearance of metastatic disease. Finally, there was repeated radiologic evidence of inflammatory disease of the upper gastrointestinal tract.

DR. CHARLES G. ZUBROD: Dr. Robert Smith will describe the surgical findings.

DR. ROBERT SMITH: This man remained a cross for the surgeons to bear during his whole hospitalization. He developed one complication after another, and never responded in a normal manner. He was seen for the first time by the surgeons one week after his first admission. At that time he had almost complete intestinal obstruction, associated with massive fluid and electrolyte loss from his stomach. The other positive finding was the x-ray evidence of a mass in the lung. On the basis of the obstruction of the duodenum and the presumed metastatic "lesion" in his chest, our preoperative diagnosis was carcinoma of the pancreas. Discussions were held concerning the possibility of this being a so-called Zollinger-Ellison syndrome with an adenoma of the pancreas. At the time of this surgery the jejunal ulcer was unusual. It was located about 6 or 7 inches from the ligament of Treitz, and it had perforated into the transverse mesocolon. A loop of small bowel was caught under this, causing complete intestinal obstruction.



This operation was followed by a very stormy postoperative period lasting about a month. At the time of re-admission the patient's condition was so poor that emergency abdominal exploration was forced again, because of the further intestinal obstruction.

During his second operation, maintenance of adequate blood pressure was a problem. The most outstanding finding at operation was the character of the wound healing noted both in the anterior abdominal wall and in the region of the resected portion of the jejunum. The other finding that should be mentioned is the presence of nodes which were quite firm, grossly suggestive of a metastatic carcinoma, situated just above the ligament of Treitz, pushing in on the jejunum and causing partial intestinal obstruction. In addition, he had an acute duodenal ulcer. To overcome the obstruction, a gastroenterostomy was deemed necessary, which would in turn require a gastric resection because of the large amount of gastric secretion. Although the pancreas was examined only superficially during the first surgery, a fairly adequate examination was made at the time of the second exploration. A nodule which measured about 0.5 cm. in diameter was found near the head of the pancreas and the duodenum and was excised. The pathologist will describe this later. A 70% subtotal gastric resection was done.

The postoperative course after this surgery was even poorer than the first. The patient never fully recovered before we were forced again into emergency management by a massive gastrointestinal hemorrhage. For the next 24 to 36 hours he was maintained by blood transfusions, but as bleeding continued it became apparent that removal of the remaining portion of stomach was necessary if bleeding was to be controlled. He was explored surgically a third time. Numerous obstructive bands were found. The descending colon measured 6 inches in diameter and was tympanitic. There was a bandlike adhesion causing this obstruction at the level of the upper sigmoid colon, apparently caused by rotation of the transverse colon. At the site of the gastrojejunostomy there were numerous small, penetrating types of ulcers, associated with frequent areas of fat necrosis.

A total gastrectomy was done and a rhue Y-type of anastomosis performed. The postoperative course this time was surprisingly quiet for about three or four days. Then the patient developed a purulent drainage from the region of the drain that had been placed in the wound. This drainage had some of the characteristics of pancreatic fluid, in that it was irritating to the skin. At the time of death it was believed that the jejuno-esophagostomy suture line had disrupted, allowing gross contamination of the peritoneal cavity leading to the massive peritonitis and death.

DR. CHARLES G. ZUBROD: The autopsy findings will be given by Dr. Thomas Dutcher.

DR. THOMAS DUTCHER: I should like to present the pathologic findings in three separate categories: (1) the anatomic cause of death; (2) the surgical procedures and their sequelae, and (3) the multiple endocrine adenomas.

The left iliac vein was partially occluded by a recent thrombus overlying an organized thrombus which was recanalized. At the bifurcation of the pulmonary artery there was a complete occlusion of both the right and the left pulmonary arteries by thrombi, with early organization at focal points along the vascular

intima. In a distal portion of the right pulmonary artery there was a completely organized and recanalized embolus which was not attached to the vascular intima. This is assumed to have been an embolus from the left iliac vein which had probably embolized some 12 hours prior to death, at which time the patient had begun to hyperventilate. The subsequent development of thrombosis proximal to the embolus, with complete occlusion of both pulmonary arteries, was the anatomic cause of death.

In addition to these large thrombi there was occlusion of many small arteries and arterioles within the left lung, and this was associated with intra-alveolar hemorrhage, but necrosis was not seen.

Venous thrombi were also present in the right myocardium, small renal veins and veins of the periprostic plexus. The right myocardial venous thrombus had focal areas of early organization and was associated with an area of myocardial necrosis. Overlying this area of myocardial necrosis there was a large mural thrombus with focal areas of early organization at points of contact with the endocardium.

The first surgical procedure was the resection of a peptic jejunal ulcer in early May, 1957. The ulcer penetrated through the jejunal wall, and there was acute and chronic inflammation of the adjacent mesentery. There was no apparent explanation for the occurrence of an ulcer in this unusual location. In late June, 1957, a resection of a duodenal ulcer and an estimated 70% gastric resection were performed. The chronic duodenal ulcer was located 6 cm. distal to the pylorus and was not unusual histologically. The duodenal mucosa was diffusely hemorrhagic. A small focus of ectopic pancreatic islet cells was seen in one of the histologic sections of the duodenum. A few of these cells contained beta granules, but alpha granules could not be demonstrated.

The segment of stomach removed at this time was enormous. It measured 27 cm. and 15 cm. along the greater and lesser curvatures, and weighed 512 gm. Normally, a 70% segment of the stomach would measure approximately 21 cm. and 7 cm. along the curvatures, and would weigh approximately 95 gm.<sup>1</sup> Many of the mucosal folds were 2 cm. or more in height and were 1 to 1.5 cm. thick. These greatly hypertrophied rugal folds were crowded together and presented a convoluted appearance resembling the surface of the cerebral hemispheres (figure 1). Histologically the mucous membrane of the stomach was markedly hyperplastic but was otherwise normal.

Lymph nodes in the region of the head of the pancreas were biopsied and contained a moderate degree of nonspecific reticulum cell hyperplasia.

Late in July, 1957, the third laparotomy was performed, the remaining portion of the stomach was resected, and an esophagojejunostomy was carried out. This portion of the stomach measured 13 cm. and 9 cm. along the greater and lesser curvatures. Thus, the entire stomach measured 40 cm. along the greater curvature and 24 cm. along the lesser curvature. The rugae were greatly hypertrophied, and there was a diffuse congestion and multiple small, hemorrhagic erosions were scattered throughout the mucosal surface. The diagnosis of benign giant rugal hypertrophy, or Menetrier's disease, was made on the basis of the histologic appearance of the large rugae and the superficial ulcerations.<sup>2</sup> The literature on this subject was reviewed and it was found that a high percentage of persons with benign giant rugal hypertrophy also have large volumes

of gastric secretion, usually with normal or low acidity, and a low serum albumin.<sup>3,4</sup> Ten to 15% of these persons have endocrine adenomas.<sup>5</sup>

The patient died six days following this last surgical procedure and an autopsy was performed. At autopsy the body weighed 98 Kg. and measured 200 cm. in length. There were obvious acromegalic changes. The midportion of the most recent surgical incision was disrupted and gangrenous. Underlying the incision within the abdominal cavity there was a large abscess which involved the general



FIG. 1. Body and antrum of stomach with 6 cm. of duodenum. The gastric rugae are markedly hypertrophied. The duodenum is diffusely hemorrhagic and the duodenal ulcer has been sectioned. This gastric segment weighed 512 gm. and measured 27 cm. along the greater curvature.

area of the surgical procedure and dissected upward through the diaphragm into the left thoracic cavity. The origin of this abscess was the disrupted esophago-jejunosomy.

Microscopically, there were necrosis and separation of the esophagojejunal anastomosis, with no organization or healing of the fibrinous blood clot between the sutured ends of the esophagus and the jejunum. There were many bacterial colonies on the mucosal surface on both sides of the anastomosis, and the jejunal mucosa was diffusely ulcerated. No ulcers were found in other areas of the small intestine or colon, and the mucosal folds of the bowel were not hypertrophied.

A most interesting aspect of this case is the presence of multiple endocrine tumors.

From the clinical history it appears that the patient had an eosinophilic adenoma of the pituitary gland. At autopsy, the sella turcica was markedly expanded and measured 4 by 4 cm. A friable brown tumor filled and overflowed the sella and spread superiorly into the tuber cinereum, as well as posterolaterally along the greater wing of the sphenoid into the middle cranial fossa. This mass weighed 12.9 gm. Histologically, the tumor had compressed the small remaining portion of relatively normal pituitary tissue peripherally against the walls of the sella turcica. This pituitary tumor was composed of small, uniform cells growing diffusely within a fine fibrous stroma. No cytoplasmic granules were demon-



FIG. 2. Low power view of adrenal cortex with two cortical nodules. Hematoxylin and eosin stain. Enlarged approximately 1/3 from  $\times 12$ .

ble in these cells, and it is therefore a chromophobe adenoma. No evidence of residual eosinophilic adenoma was found. The tumor was locally aggressive and extended into the brain substance, but the usual cytologic criteria for malignancy were not present.

Probably as a consequence of the pituitary adenoma, the testes were markedly atrophic and weighed only 5 gm. each. Histologically, the interstitial cells of Leydig were absent, no spermatogenic epithelium was present in the seminiferous tubules, and only a few Sertoli's cells remained, many of which were detached.

The adrenal glands weighed 18.2 and 11.8 gm. There were multiple adrenal cortical adenomas, varying from microscopic size to nodules measuring 2 mm. in diameter (figure 2). These were present predominantly in the zona glomerulosa

but a few of the larger ones extended into the medullary region. The cells of these adenomas morphologically resembled those of the normal zona glomerulosa and were lipid-rich, as were the cells of the zona fasciculata.

The thyroid gland weighed 40 gm. The acini were lined by flattened epithelium and were filled with colloid. Several follicular adenomas were seen, and the epithelium of these adenomas was also flattened.

Near the lower pole of the right lobe of the thyroid gland there was a 2 by 1 cm. parathyroid adenoma which weighed 3.2 gm. (figure 3). On cut surface the characteristic cystic areas and the red and yellow coloration of parathyroid

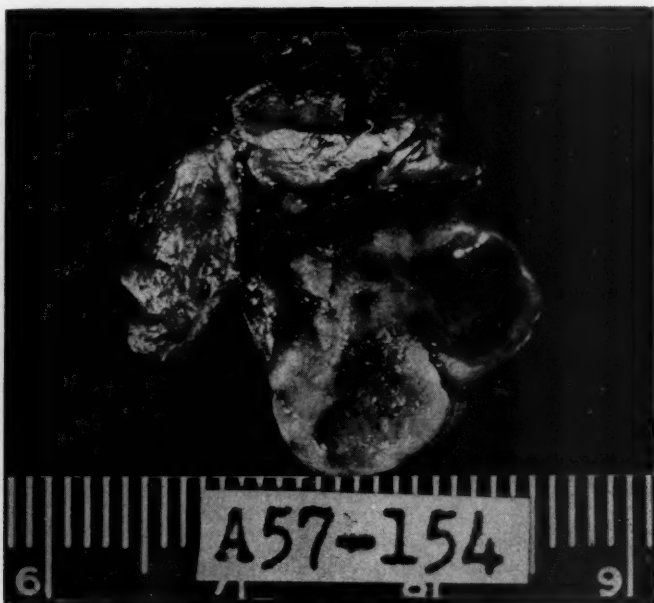


FIG. 3. Adenoma of right lower parathyroid gland. This adenoma measured  $2 \times 1$  cm. and weighed 3.2 gm. Histologically there was hyperplasia of chief cells and oxyphil cells.

adenomas were apparent. Microscopically, the adenoma was composed of hyperplastic foci of the three cell types normally present in the parathyroid glands. The chief cell and oxyphil components were most numerous, but large foci of water-clear cells were present. The chief cells formed small acini which contained pale-staining colloid. This colloid was para-aminosalicylic acid positive. The other three parathyroid glands were similarly hyperplastic but were not enlarged.

The serum calcium and phosphorus values were consistent with an active parathyroid adenoma, and the kidney tubules contained intraluminal and extraluminal deposits of calcium. No metastatic calcifications were found in either the thyroid gland or the stomach, and there was no evidence of hyperparathyroidism in the bones.



The pancreatic acini and ducts were normal. Multiple islet cell adenomas, which measured from 4 to 8 mm. in diameter, were scattered diffusely throughout all portions of the pancreas. There was no particular preference for one portion of the organ over another. In general, there were three distinct histologic patterns in these adenomas. The type most commonly seen was a trabecular or "winding-ribbon" pattern (figure 4). This type was composed of small cuboidal or polyhedral cells arranged in long cords, with each cell abutting on a small capillary which was carried in a fine fibrous stroma. This pattern was modified in areas of some adenomas by the presence of a dense fibrous stroma

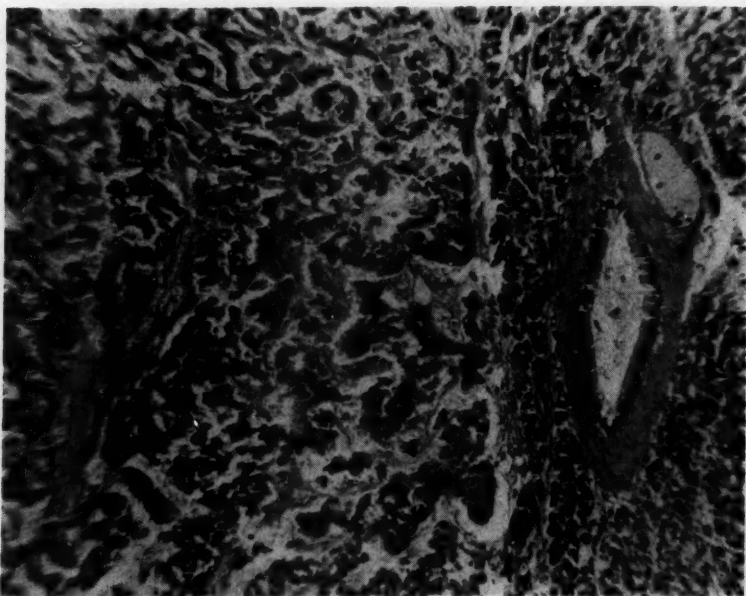


FIG. 4. "Winding-ribbon" histological pattern present in many of the pancreatic islet cell adenomas. Note columnar epithelial cells of normal pancreatic duct. Hematoxylin and eosin stain. Enlarged approximately  $\frac{1}{8}$  from  $\times 120$ .

which crowded the cell cords into single cell strands. The second most common type was a more solid pattern, with the cells arranged in cords, clusters and alveoli. Within adenomas of this type, tubular structures lined by tumor cells were occasionally seen, and ducts lined by columnar epithelium were rarely seen. In the third histologic type there was no pattern to the tumor cells, and they were clustered between cavernous blood-filled spaces which were lined by endothelial cells.

The cells of all three types were of uniform size, and mitotic figures were rarely seen. The usual cell was polyhedral or cuboidal, with a tendency to be columnar in areas where the alveolar arrangement predominated. The nuclei were round or ovoid, and nucleoli were not usually present. Most of these

cells contained neither alpha nor beta cytoplasmic granulations, but a rare cell in the midst of the adenomas contained indistinct basophilic material which may have been atypical beta granules.

The normal pancreatic islets contain the normal complement of alpha cells (5 to 10%) and beta cells (80 to 90%), as would be expected if the islet cell adenomas were nonfunctional.

In some of the islet cell adenomas the cells appeared to be invading through the fibrous capsule into the regions of the ducts and acini. This is a common feature of islet cell adenomas and is not a criterion for malignancy. The only

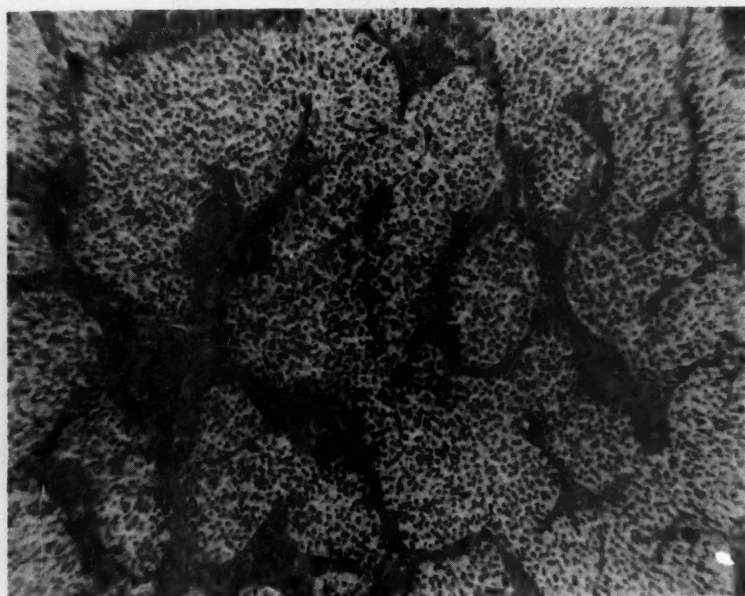


FIG. 5. Metastatic pancreatic islet cells in a lymph node from the hepatic hilar area. Hematoxylin and eosin stain. Enlarged approximately  $\frac{1}{3}$  from  $\times 120$ .

positive criterion for malignancy in islet cell adenomas is the invasion of the tumor cells into a blood vessel or lymphatic space. Vessel invasion was not present in any of these adenomas.

Because there was replacement of lymph nodes by a tumor which closely resembled the islet cell adenomas it should be emphasized that no adenoma was over 8 mm. in diameter, and that histologically each of the adenomas appeared to be benign. One of the periportal lymph nodes was replaced by cells which resembled the solid type of islet cell adenoma (figure 5). Approximately 5% of the tumor cells in this lymph node contained cytoplasmic basophilic material like that noted in the adenomas within the pancreas (figure 6).

Both of the hilar masses noted on the chest x-ray films were lymph nodes replaced by metastatic tumor. The larger measured 3.5 cm. in diameter and

was hemorrhagic. Histologically, this hilar mass consisted of cells similar to the pancreatic adenomas. The fine supporting stroma and, in some of the better preserved areas, the alveolar and "winding-ribbon" patterns were prominent (figure 7). Occasional areas were seen in which the stroma was highly vascular. The other hilar lymph node contained tumor of a more pleomorphic nature, with some spindle cells, variable cell size, and some multinucleated cells. Mitoses were seen only rarely. There was no definite architectural arrangement of the tumor cells except that two well-formed ducts with tall columnar epithelium

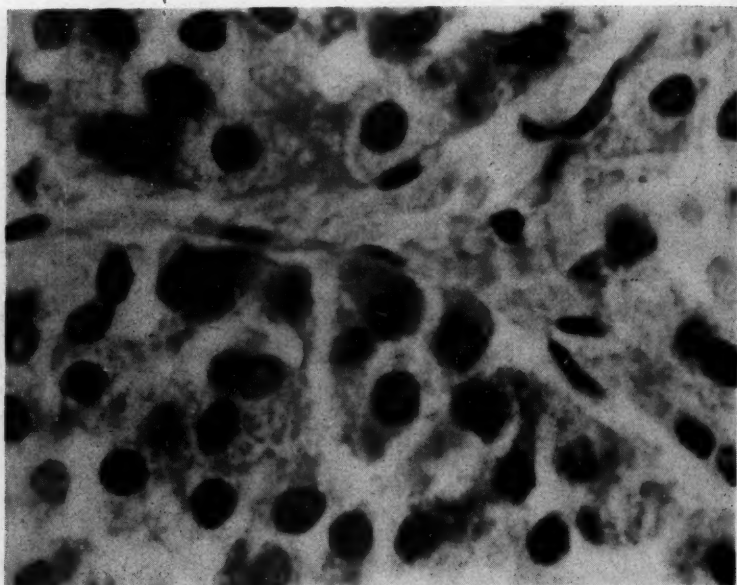


FIG. 6. Higher magnification of cells in figure 5. The darker staining cells in the central area of the field contain basophilic cytoplasmic granulations. Gomori's aldehyde-fuchsin stain.  $\times 1360$ .

resembling pancreatic ducts were present in the midst of the tumor. There was no basement membrane for these structures. Interspersed with the columnar cells were cells which were indistinguishable from the surrounding tumor cells. The presence of ducts in metastatic islet cell carcinoma has been described, to my knowledge, in only one previously reported case,<sup>6</sup> but it has been frequently described in islet cell adenomas within the pancreas. The cells of these two hilar masses were in general poorly preserved, and no definite basophilic cytoplasmic granules could be demonstrated.

No metastatic foci could be found in the liver, which is unusual, as the liver is one of the most frequent sites for metastasis of islet cell carcinomas. The possibility that the hilar masses are metastases from one of the other endocrine gland adenomas cannot be excluded, but does seem remote.

The following is a tabulation of the endocrine gland adenomas: (1) eosinophilic adenoma with acromegaly, diagnosed clinically 30 years prior to death and treated by partial surgical resection and x-irradiation; (2) chromophobe adenoma of the pituitary gland which was locally aggressive; (3) functional parathyroid adenoma; (4) multiple islet cell adenomas in the pancreas; (5) metastatic islet cell tumor in hilar and periportal lymph nodes; (6) ectopic islet cell tissue in the duodenum; (7) multiple adrenal cortical adenomas and (8) multiple follicular adenomas of the thyroid gland.

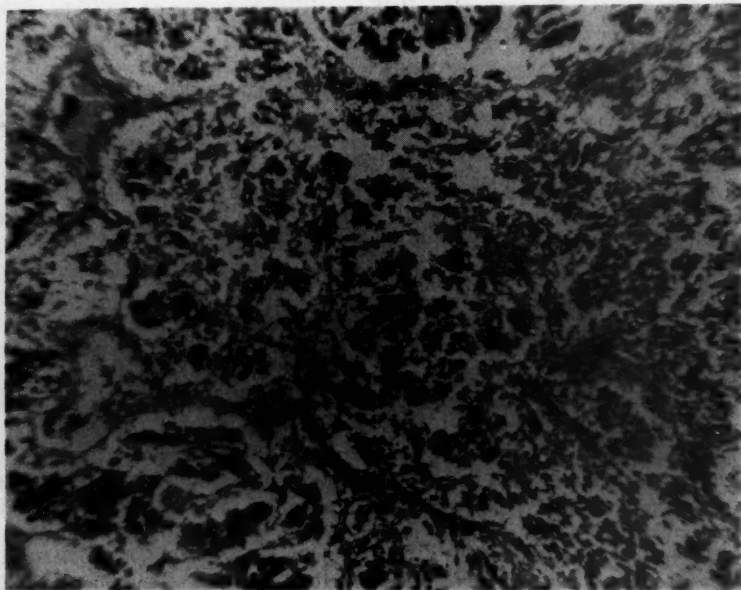


FIG. 7. Tumor in pulmonary hilar lymph node. A suggestion of a "winding-ribbon" pattern is present. Compare the columnar epithelium lining the space in the upper corner with the normal pancreatic ductular epithelium in figure 4. Hematoxylin and eosin stain. Enlarged approximately  $\frac{1}{3}$  from  $\times 120$ .

In summary, this patient was known to have had acromegalia for about 30 years. Other long-standing endocrinopathies were manifested clinically by renal lithiasis in 1944, with impotence and atrophic testes since 1949. The patient developed ulcer symptoms while in a stressful situation and, when hospitalized, was found to have laboratory values consistent with multiple endocrinopathies. There were gastrointestinal bleeding, marked hypersecretion of gastric juice, and hypoalbuminemia. Ulcers of the jejunum, duodenum and stomach did not respond to medical therapy and were treated surgically. A diagnosis of Menetrier's disease was made from the surgical specimen of the stomach. With the exception of the jejunal and duodenal ulcers, all of the clinical and laboratory features of this patient have been described as part of, or associated with, benign giant rugal hypertrophy of the stomach.<sup>2,3,4,5</sup>

At autopsy the multiple islet cell adenomas and the islet cell tumor metastatic to regional and hilar lymph nodes in association with multiple gastrointestinal ulcers and gastric hypersecretion seemed to favor a diagnosis of the "Zollinger-Ellison syndrome." A case almost identical with the present case was reported by Underdahl in 1953.<sup>7</sup>

Terminally, the patient developed overwhelming infection associated with poor healing of the esophagojejunal anastomosis. The immediate cause of death was a pulmonary embolus and thrombosis, with occlusion of both pulmonary arteries.

**DR. CHARLES G. ZUBROD:** The Zollinger-Ellison syndrome has been mentioned several times, and Dr. William Pieper, of the National Cancer Institute, will comment on this.

**DR. WILLIAM PIEPER:** The Zollinger-Ellison syndrome has been described by some—namely, Zollinger and Ellison—as a new clinical entity consisting of a fulminating and frequently fatal peptic ulceration. This is associated with a pancreatic islet cell tumor which is usually noninsulin-producing in type. There are two main characteristics of the syndrome: (1) excessive gastric secretion, and (2) rapidly progressive, atypically located ulcerations which occur despite seemingly adequate medical and/or surgical therapy.

Males are affected almost as frequently as females, and the age span has ranged from 19 to 78 years in the cases reported thus far. Gastrointestinal difficulties compatible with ulcer symptoms are the chief complaints presented in over 75% of the cases.

Only 22% of the cases reported to date have had multiple ulcers at the initial examination, and approximately 50% of the ulcers found at first examination have been distal to the first portion of the duodenum; some are even distal to the ligament of Treitz. Twelve-hour nocturnal gastric aspiration in a typical case is greater than 1,000 c.c. and contains more than 100 mEq. of free hydrochloric acid. An example of the type of secretion in the inexorable course of the patients in this syndrome is given in the following report by Zollinger and Ellison.

The patient was a young girl. The following therapy failed to control the hypersecretion of the stomach: a large subtotal gastrectomy, fundusectomy of the stomach, vagotomy, intensive medical therapy, and 2,000 r. to the remaining 6 by 8 cm. gastric pouch. A total gastric resection ultimately had to be done on this girl, and she is alive and well today, according to the most recent information.

The associated pancreatic tumors may be either single or multiple, and from one-third to one-half are malignant, as defined by distant metastases. There is no predilection for any one part of the pancreas. The tumors per se are islet but are usually nonbeta-cell in origin. However, beta cell tumors may be concomitantly present, and the clinical picture rarely may include hypoglycemia or diabetes. It is also interesting that, regardless of the number of operations, associated tumors of the pancreas were not recognized until necropsy in over half the patients reported.

Approximately three fourths of the patients reported to date had subsequent surgery following initial operation, and in the same proportion the final episode was a gastrointestinal catastrophe. To date, it appears that the only adequate therapy for a patient of this type is total gastrectomy.

In conclusion, it is apparent that the etiologic status of this clinical condition



is far from resolved. There are many good reasons to challenge the right of the Zollinger-Ellison syndrome to exist as a clinical entity per se, not the least of which is the common occurrence of other endocrine gland tumors in these patients. Accurate figures are hard to come by, as the detailed necropsy findings are rarely reported, but from the data in the literature it is apparent that concomitant tumors of the parathyroids, pituitary and adrenal glands are far from uncommon in these patients—all of which makes one wonder if the clinical condition called a syndrome is not just a facet of a much larger picture of multiple adenomatosis.

Finally, a word as to etiology. In many of the early reports glucagon was raised as an etiologic possibility; in two of the cases reported to date a glucagon-like material has been injected into rabbits and has been found to cause a transient increase in the blood glucose. In one of these cases a serum component was found which moved electrophoretically in a manner identical to the glucagon. Along these lines, it should be noted that there is in existence a strain of mice which is hereditarily obese and has present a chronically high level of glucagon and insulin. Dr. John Mayer, who has had extensive experience with this type of animal, states that to his knowledge an undue incidence of gastrointestinal ulcerations has not been found. Since the earlier reports, studies have appeared which demonstrate that in both acute and chronic experiments glucagon has no effect on gastric function either by direct action or via the adrenal cortex. Furthermore, there is no evidence in support of the claim that glucagon activates the adrenal cortex; in fact, there are studies giving evidence to the contrary. As stated above, parathyroid adenomas are not an unusual occurrence in these patients, and the association of gastrointestinal ulcerations in this type of tumor is well documented, the Mayo Clinic reporting an incidence of 25%.

It is of course possible that the etiologic factors involved are not linked in a series of metabolic sequential causation, but can be directly imputed to a genetic basis.

DR. CHARLES G. ZUBROD: Today we have, as a discussant of this problem, Dr. Paul Wermer, of the Presbyterian Hospital in New York. Dr. Wermer has made many contributions in the field of endocrinology, not the least of which are the studies on multiple adenomatosis. Former house staff members will recall how much help Dr. Wermer was to them in discussing complicated cases on the ward. For these several reasons we have invited Dr. Wermer to discuss this complicated problem.

DR. PAUL WERMER: I want to express my gratitude for the opportunity given me here to discuss this unusual and surprising combination of endocrine and gastrointestinal lesions. It so happened that on the day your invitation arrived in New York, a patient of mine, one of the four women I had originally described in my paper,<sup>8</sup> had to undergo an emergency gastrectomy for a heavily bleeding duodenal ulcer, and this was an occasion to review and restudy the whole problem. I feel that your invitation could not have come at a more appropriate time.

In my discussion of the syndrome I shall try to limit myself mainly to those aspects which have recently been mentioned in the literature.

Regarding the pathogenesis, there can be no doubt about the genetic origin of the disease, even if this has not been proved in every case. There is my

description of the family consisting of the father and four daughters who all showed multiple endocrine tumors and peptic ulcers; then there is a report on a father and daughter from the Massachusetts General Hospital; and finally, also in some of the cases reported from the Mayo Clinic, a hereditary occurrence becomes extremely probable from the author's descriptions of the patient's family. In view of the simultaneous appearance of the lesions in the various endocrine glands and their identical occurrence in the members of the family I have studied, the term "inherited syndrome" appears to be appropriate. The assumption is that the various lesions are not mutually interdependent but are the result of a common cause. I believe that this common cause lies in a dominant autosomal gene.

The question has been raised recently as to whether the tumor in the pituitary is the cause of the other endocrine tumors, irrespective of whether this "primary" pituitary tumor is inherited or has originated from another cause. In this way it was even speculated whether the tumor of the hypophysis might not have been the consequence of a primary hypogonadism (of unknown cause). I cannot accept this whole hypothesis. First of all, the existence of trophic hormones of the anterior pituitary lobe for the parathyroids and the islets of Langerhans is not proved. In the great majority of cases of pituitary tumors the other endocrine glands are uninvolved. In a case of this syndrome reported from the Veterans Administration Hospital in Boston, the tumor of the hypophysis was 1 mm. in diameter, yet the patient had multiple islet cell adenomas and multiple ulcers of the gastrointestinal tract which were the cause of his death. It is hard to believe that a tiny chromophobic adenoma could have caused all the changes. I can accept even less the idea that gonadal failure should be responsible for the growth of these pituitary tumors. In the family I described, in every case the clinical course points definitely to the pituitary tumor as the cause of the patient's amenorrhea.

It is difficult to see why we should have to limit the effects of an abnormal gene to one endocrine organ, the hypophysis, as long as the role of the genetic factor is accepted at all. If we do recognize the role of the gene, as we must, we have no difficulty in looking upon the tumors of the three endocrine glands as coördinated and not as interdependent lesions. A similar situation exists in various other syndromes. I therefore believe it unnecessary to postulate a special role for the pituitary.

I should like to say a few words about the pathology of the affected endocrine glands, about which we have heard much today. I believe the pathology in these patients is quite characteristic, and can be clearly distinguished from the changes we find in the solitary tumors in the same glands.

As to the islets, there are many small and large adenomas in and around the pancreas; a common location is apparently the wall of the duodenum. A tumor in this area was found in the patient reported here, and three cases in the family I have described had adenomas of the islet cells in the same place. Several cases are reported in the literature in which the findings were similar. The microscopic structure of islet cell tumors in adenomatosis appears to have very characteristic features in that the tumors usually show a "ribbon" pattern.

As to the parathyroids, it seems that every gland is involved, irrespective of the condition of the kidneys. This was also true in the case presented here, since,

in addition to the one gland with a large adenoma, hyperplasia was present in the other three glands. There is also present an adenomatous transformation of the parathyroids in which all cell types of the normal parathyroid are represented. This fact distinguishes the parathyroid tumors of adenomatosis from primary hyperplasia of the parathyroids, where one finds water-clear cells in every enlarged gland, and from the secondary hyperplasia of the parathyroids due to chronic renal disease with hyperplasia of the chief cells.

As to the pituitary, I have been under the impression that a high percentage of these pituitary tumors are very invasive, perhaps more so than the solitary pituitary adenoma. The case presented here is another example of the tendency to form so-called malignant adenomas. The first two cases of adenomatosis of endocrine glands which were published in detailed descriptions many years ago—one from Johns Hopkins and another from Germany—were called malignant adenomas of the chromophobic cells.

It is interesting that your patient, who at first apparently had an eosinophilic tumor, later had a large chromophobic adenoma. One of the cases I observed showed an analogous but different course. The patient had had signs of an endosellar tumor with amenorrhea for several years, suggesting a chromophobic adenoma, but five years later acromegaly started to develop. When this patient died after an operation for multiple islet cell tumors, about 10 years after the onset of her acromegaly, a mixed eosinophilic and chromophobic tumor was found at autopsy.

If we consider the parathyroid tumors in the syndrome, it will perhaps be less surprising that one and the same gene should lead to the development of an eosinophilic adenoma in one case, and to a chromophobic tumor in another, as in the family I described, or, as discussed today, to the growth of both these tumors, apparently in succession, in one patient.

There the situation is similar, in that enlargement of the glands is caused by adenomas of every cell type, as mentioned before. In the pituitary itself, we know from the application of the para-aminosalicylic acid stain that there is less difference between the activities of chromophobes and chromophiles than we formerly believed to be the case, and also that a number of so-called chromophobic adenomas were in reality tumors of amphophilic cells. If in today's case the pituitary tumor had been found to consist of amphophilic cells, the problem just mentioned would have been nicely resolved, since eosinophilic and amphophilic cells have about the same effect upon growth; the tumor was, however, chromophobic and not amphophilic, as I have been told.

If we now turn to the peptic ulcer seen so frequently in adenomatosis of endocrine glands, we have to state at the outset that the type of ulcer we find does not seem to reflect the nature of the lesion of the pancreas. Peptic ulcers of the same highly "malignant" type, resistant to conservative therapy, producing various complications like perforation, hemorrhage and pyloric obstruction, and followed by marginal ulcers a few weeks after a gastrectomy, have been found in patients with functional or nonfunctional benign islet cell tumors, and in cases of islet cell carcinoma. I am not convinced that all of Zollinger's and Ellison's cases reported as malignant would have to be classified in the same way by the criteria of other pathologists. One of the cases Ellison reported as showing malignant islet cell tumors is one I mentioned before. The woman died at

the Presbyterian Hospital in New York and there the islet cell tumor had been called benign.

I should like to give you the story of one of these cases, which is quite typical. The patient is one of the four sisters who were operated upon just two weeks ago. For many years this woman had had no symptoms of an endocrine disease except those caused by an endosellar tumor of moderate size, namely, headache and amenorrhea. For a number of years she had also been known to have a large ulcer of the duodenum, and this had recently bled very severely and had also given her a partial pyloric obstruction with hypochloremia. There had never been any symptoms of spontaneous hypoglycemia. At operation, one islet cell tumor was found in the tail of the pancreas and another in the expected location—the wall of the duodenum. There cannot be much doubt that there are other tumors in the rest of the pancreas, as evidenced in two of her sisters, who had undergone pancreatectomy for spontaneous hypoglycemia. I doubt very much that the islet cell tumors are more than an associated lesion here, or that they should be held of greater importance in the syndrome than are the tumors of the pituitary or the parathyroid glands. I should like to point out that the patient with the syndrome died at Presbyterian Hospital of a gastric ulcer many months after a subtotal pancreatectomy which had completely relieved the hypoglycemia, and that her sister, who also underwent subtotal pancreatectomy for her hypoglycemia, now, 11 years after operation, has a large ulcer of the duodenum.

One is tempted to mention the parathyroids and the known association of hyperparathyroidism, particularly in hyperplasia of the parathyroid glands, with peptic ulcers. I cannot believe, however, that the parathyroids are responsible for the ulcers of our patients any more than for the islet cell tumors, since in cases of adenomatosis of the endocrine glands there is no parallelism between the function of the parathyroids and the presence of peptic ulcers. Again, it looks like a simple association between the tumors and the ulcers, and not like a causal relationship.

As to the symptomatology of the gastrointestinal lesions, your patient had an enormous amount of fluid in his gastric aspirate, a finding also described by Zollinger, and as was the case in the patient from the Boston Veterans Hospital. Furthermore, your patient showed both the giant rugae of the stomach of Menetrier's disease and the typical hypoproteinemia of these patients. Three cases with Menetrier's disease are also on record from Mayo Clinic patients with endocrine adenomatosis. I do not believe that the adenomas of the pituitary, the parathyroids or the islets can be responsible for the giant rugae. No doubt they are another effect of the abnormal gene. To me, this appears to be another argument in favor of the genetic origin of peptic ulcers in the syndrome.

One gets the impression that these patients often have a distinctive and quite characteristic x-ray picture of the gastrointestinal tract, as was also shown here by Dr. Hilbish. There are several similar reports in the literature. Fischer and Flandreau reported a patient on whom the diagnosis had been made of "an inflammatory lesion in the descending and transverse duodenum and the upper jejunum." (This patient had had a large duodenal ulcer and several smaller ulcers lower down.) In one case from the Massachusetts General Hospital, similar changes were found in the upper jejunum and a malignant tumor of the



jejunum was suspected, whereas the correct diagnosis was peptic ulcer of the stomach and duodenum.

I should like to show several x-ray films of my patients. The first shows the four enlarged sellae of the four sisters whose histories I published, one with acromegaly and the other three without acromegaly, and therefore presumably with chromophobic tumors.

The next slides show the upper gastrointestinal tract of the one patient who did not undergo surgery. The contour of the duodenum is quite irregular, and is similar to that of your patient. An ulcer of the duodenum can be seen. Furthermore, there are roundish indentations in various parts of the duodenum which might easily be produced by islet cell tumors pressing upon the wall of the duodenum. Since this patient has not been explored surgically, one cannot be sure that this is the correct explanation, but islet cell tumors of about the size of the indentation had been present in her two sisters who were operated upon because of their hypoglycemia, and they had been found in the same area. I believe that such an x-ray picture is characteristic of the syndrome.

The patient whose x-rays I just demonstrated suffers from very severe chronic diarrhea of a spruelike character. It had been suspected that one of her islet cell tumors had compressed the pancreatic duct and thus caused diarrhea, but since the trypsin content of the duodenum was found to be normal this hypothesis can no longer be held. In the case reported from the Veterans Administration Hospital in Boston diarrhea was also seen, which, in this case, improved on gastric lavage, a procedure we did not try on our patient because she also had a tumor of the trachea, possibly unrelated.

It is evident that the management of patients of this type presents quite a number of serious problems. In my experience a conservative approach to the many endocrine tumors is advisable. The situation is different as far as peptic ulcers of these patients are concerned, as we know they will often require radical surgical procedures. I have doubts as to the value of operating upon the pancreas with the aim of curing the ulcer, while pancreatectomy for the treatment of uncontrollable hypoglycemia may be unavoidable and will give excellent results for the alleviation of this symptom. However, it will have to be a subtotal pancreatectomy, which is a formidable procedure. The parathyroid tumors are quite frequently silent and then do not require surgery. In a number of cases, however, a parathyroidectomy consisting of the removal of several tumors had to be done mainly for the treatment of nephrolithiasis and not for manifest osteitis fibrosa.

May I be permitted to say that ACTH and cortisone are extremely dangerous drugs in patients with peptic ulcers in general, and even more so in ulcers which look like "inflammatory lesions in the duodenum and jejunum."

Finally, I should like to say a few words about the general disturbance in development which we must postulate to have taken place in patients with such a disease. I believe we are dealing with multiple malformations of the endocrine glands, going back to an early embryologic state, approximately to the fourth week. Some factor is either absent or cannot function properly because of an abnormal gene. This factor is probably a chemical agent which is in some way responsible for the orderly development of the pituitary, the parathyroids, the islets and perhaps also of the upper gastrointestinal tract. These tissues have something in common which makes them vulnerable. so to speak, at the same



moment of their development. There is an analogous situation in other malformations, such as those caused by German measles. It does not seem important whether one then calls this gene pleiotropic, since it acts in various directions, or whether one rejects this term because of the one-gene, one-enzyme hypothesis. I do not think we should be too dogmatic in this instance, since we actually know so little about the mechanism of gene action.

As a clinician, I believe I should stop here. The geneticists and embryologists who have heard about this syndrome are extremely interested in it, and I think we should leave further analysis to them.

DR. CHARLES G. ZUBROD: Are there questions or comments about this patient or this problem?

QUESTION: I should like to know whether the poor wound healing has been seen in any other patients with similar conditions.

DR. PAUL WERMER: It could possibly be related to the use of cortisone. I believe the surgeons have more knowledge about this than I, but I do know that cortisone often has a tendency to cause poor wound healing.

QUESTION: Have the patients you have observed being treated conservatively had this difficulty?

DR. PAUL WERMER: No, they have not. They have had complications which were directly related to the ulcer—perforations, bleeding and so on—but there was no poor wound healing.

QUESTION: I should like to know how high the serum phosphorus went in this patient presented today.

DR. WILLIAM PIEPER: To 17.5.

DR. CHARLES G. ZUBROD: I should like to thank Dr. Wermer for his excellent discussion. The meeting is adjourned.

#### SUMMARY IN INTERLINGUA

Il se tracta, in le caso presentate, de multi-adenomatosis con associate ulceration peptic e hemorrhagia gastrointestinal. Le patiente esseva un gigante pituitari qui, a un etate plus avantiata, exhibiva provas de insufficientia testicular e de ulceration peptic. Al tempore de su admission al hospital, ille presentava un syndrome de sever hemorrhagia gastric, signos de hyperparathyroidismo, e lesiones thoracic compatibile con un diagnose de morbo metastatic. Subsequentemente, tres laparotomias esseva effectuate. Al occasion del prime, resection cuneate de un benigne ulcere jejunal esseva executate; al occasion del secunde, gastrectomia partial; e al occasion del tertie, gastrectomia total. Le segmento gastric que esseva excidite esseva extremamente grande e habeva erosiones hemorrhagic dispergite in omne partes del superficie mucosal. In despecto del effortio chirurgic de arrestar le sanguination, le patiente moriva. Le causa immediate del morte esseva un embolo pulmonar e thrombose con occlusion de ambe arterias pulmonar.

Le sella turcic esseva marcatamente expandite e contineva un adenoma chromophobe con un peso de 12,9 g. Esseva trovate multiple adenomas adreno-cortical. Un adenoma parathyroide de 2 per 1 cm de grandor e 3,2 g de peso esseva presente. Se trovava in plus multiple adenomas de cellulas insular. Granulation cytoplasmic alpha o beta non esseva constatate in multe cellulas. Le massas thoracic hilar esseva nodos lymphatic reimplaciate per tumor metastatic, de un typo simile a illo del adenomas pancreatic.

Es discutate le etiologia de iste syndrome de multi-adenomatosis. Es postulate

que le varie lesiones non depende le unes del alteres sed que illos resulta de un causa commun. Iste causa commun es vidite in un dominante gen autosomal.

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## CASE REPORTS

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### GASTRIC ULCER DURING STEROID THERAPY IN A PATIENT WITH PERSISTENT ACHLORHYDRIA: EFFECTS OF ANTIRHEUMATIC MEDICATION \*

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THE ultimate cause of gastric or duodenal ulcer is unknown. That such ulcers should be grouped as "peptic" is debatable.

Theories, old but still current, conceive ulcer as (1) a sequel to a more diffuse gastritis (Cruveilhier); (2) ischemia resulting organically from embolism or arteriosclerosis (Virchow, Hauser), or functionally from arterial spasm in the duodenal or stomach wall; (3) from chemical changes in the visceral wall or in the gastric secretions; (4) neurogenic, as a sequel to a lesion of the brain, a disturbance of the vegetative nervous system, or a malfunctioning psyche.<sup>1,2</sup> The chemical pathogenesis of ulcer has had its most prominent defender in B. W. Sippy, and this theory constitutes the basis of current medical and surgical treatments.<sup>3</sup> Infection and local trauma no longer receive more than historical mention as precipitants of peptic ulcer. Gastric or duodenal ulcers following burns (Curling's ulcers) are attributed to stress resulting in hypercorticism and resultant disturbed gastric chemistry.

Superficial erosions due to local trauma, systemic crises or approaching death ("stress" ulcers) have long been recognized as distinct from the chronic peptic ulcer syndrome.

Cushing<sup>4</sup> repeated observations made by Rokitsky in 1841 on the causation of acute disintegration of the gastric, duodenal or esophageal walls in patients with brain lesions. The nervous causes have been assumed since the time of Rokitsky to be mediated by the vagus nerves. Vagotonia would in some way change the stomach or duodenal wall to make it vulnerable to its own enzymes.

Integration of the vascular, chemical and neurogenic factors makes for a more understandable pathogenesis than do any of these mechanisms taken singly.

In addition to the problem of the occurrence of peptic ulcer, there is the question of what determines its typical chronicity. The concept of digestion of a changed, unresistant wall by the acid-activated pepsin is easily comprehended. The axiom of Schwarz, quoted by Palmer<sup>1</sup>—"No acid; no ulcer"—is widely accepted. Substantiation is abundant. This chemical "explanation" may be oversimplification.

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Peptic ulcer located in the stomach is generally recognized to be characterized more frequently by lower hydrochloric acid values than are ulcers in the duodenum. Correspondingly, the mean value of the level of excretion of uropepsinogen in duodenal ulcer has been determined as four times the normal. The level of uropepsinogen falls within the normal range in patients with gastric ulcer.<sup>5</sup>

Perhaps we should restrict the dictum of no active duodenal ulcer without free hydrochloric acid. There are some clinical differences between peptic ulcers in the duodenum and those proximal to the pyloric sphincter, most notable being the greater tendency of gastric ulcers to heal spontaneously.

The crux of the pathogenesis of chronic peptic ulcer in humans is, What is the status of the stomach or duodenal wall as to resistance to autodigestion? Free (uncombined) hydrochloric acid has been taken as essential to the formation of peptic ulcer. Active "peptic" ulcer without free hydrochloric acid is denied, or is interpreted as an incorrect finding.<sup>8</sup> Brown<sup>6</sup> would not accept a diagnosis of achlorhydria without the administration of histamine. Agreement has largely eliminated gastritis as a factor in ulcer causation. Gastritis leads to atrophy and subsequent decrease or cessation of acid secretion.

A possible hormonal factor in ulcer pathogenesis had been given scant attention until recently. Selye<sup>7</sup> introduced the assumption of stress triggering an increased release of adrenocorticosteroids.

Gray, Ramsey and Thorn have collected an extensive bibliography on the relation of adrenal hyperactivity and hypoactivity to peptic ulcer.<sup>8</sup> They confirmed Selye's<sup>9</sup> demonstration of an increased gastric secretion of pepsin by the chief cells of the stomach during glucocorticoid administration. They called attention to the frequency of increased activity of peptic ulcer during corticoid therapy. Perforation has been reported. Recurrence of hemorrhage during treatment with corticoids has been frequent. Although acid determinations were not reported in this series, it was inferred that the increased activity of the ulceration could be ascribed to increase of the gastric secretions. Antacids were recommended.

Kammerer and Rivelis<sup>10</sup> observed no effect of hydrocortisone, prednisone or prednisolone on the secretion of hydrochloric acid or pepsin.

#### CASE REPORT

A 51 year old woman, first seen in September, 1952, had had rheumatoid arthritis (stage II, class III) for five years. Injections of ACTH, neoarsphenamine and gold successively over a three-year period had not helped her. On examination she had a typical distribution of warm, swollen joints, a moderate anemia, an elevated sedimentation rate, and *Entamoeba histolytica* in the stools. The Kahn test of the blood gave negative results on three occasions. Urinalysis gave normal results. The serum protein, A/G ratio, calcium, phosphorus, alkaline phosphatase and uric acid were within normal limits. Serum electrophoresis gave a normal curve. The sheep cell agglutinin test was positive in a 1:32 dilution. No L. E. cells were found. X-rays of her gall-bladder, stomach and colon in 1948 had given negative results. Because of her reported bad experience with ACTH, steroids were withheld until October 7, 1953. In the interval she had received salicylates, thyroid, carbarsone, Diodoquin, ascorbic acid and thiamine.

The patient had had intermittent epigastric distress unrelated to defecation since 1940. An exacerbation of epigastric distress had occurred in December, 1952. Amebae were no longer present in her stools. Her pain was sharply localized, did not shift and was not relieved by belladonna. The distress did not occur before breakfast, and was relieved by food. No hydrochloric acid could be detected on giving an alcohol test meal. A cholecystogram and painstaking roentgenologic study of her stomach demonstrated no pathology.

Administration of hydrochloric acid always increased the epigastric distress. Administration of antacids, milk feedings and Probanthine (120 mg. daily) did not relieve the distress.

In March, 1953, the patient's hemoglobin, erythrocytes and leukocytes were present in normal amounts. She was given 600 mg. of phenylbutazone daily, with marked relief of joint pain. This was reduced in four days to 400 mg. and three weeks later to 200 mg., with continued relief. After four months her hemoglobin had receded from 90% to 71%, the leukocytes remaining unaltered in number and distribution. Her intake of phenylbutazone had been reduced to 100 mg. daily, with a corresponding increase in joint symptoms. The daily phenylbutazone dose was again raised to 400 mg. and continued to March, 1954 (12 months in all). The patient at this point felt that tablets of aspirin and calcium gluconate relieved her more than did phenylbutazone, so the latter was discontinued.

The patient was free from abdominal distress from April, 1954, until January, 1955 (nine months). After steadily refusing to take oral steroids, she was started on prednisolone (10 mg. daily) in October, 1955. She experienced marked, prompt relief of joint pain. Prednisolone was reduced to 4 mg. daily on December 12, 1955, with continued relief of skeletal pains. The 4-mg. dose was continued until the patient entered the Presbyterian Hospital of Chicago on March 30, 1956. On this date x-ray studies demonstrated a large perforating ulcer on the posterior wall of the stomach between the pars angularis and the fundus. This was excised by Dr. John Olwin.

The microscopic examination of the ulcer and its base was dictated by Dr. George M. Hass: "Microscopic study of the fragments of tissues discloses a superficial ulcer which has a base composed of recently formed granulation tissue. There is some preservation of the mucosal structure of the stomach along the margin of the crater of the ulcer. In the gastric mucosa in this area there is a subacute and chronic inflammatory reaction of the type commonly found around the margins of peptic ulcers. There is no dense scar tissue at the base of the ulcer nor is there any evidence, microscopically, that the ulcer has been active for a prolonged period. Most of the tissue beneath the base of the ulcer is edematous and fibroblastic in nature. This type of tissue extends entirely through the gastric wall into the serosa. The lesion, therefore, is penetrating in character and may have actually perforated, although there is no evidence of that in the sections. The evidence can be interpreted, however, as being a lesion which at least is impending in perforation. The degree of vascular disease and the type of vascular disease found in the bed of the ulcer is compatible with the type of arteriosclerosis and arteritis which is found commonly in the bed of a peptic ulcer of the stomach after a few weeks. There is also, in one artery, a thrombus of recent origin associated with extensive inflammation of the arterial wall. There is no evidence that arterial changes of this type are primary in the development of lesions of this nature. It may be assumed that the lesions of the vascular system are secondary to the inflammation created in the course of penetration of the ulcer."

Fluoroscopic and x-ray film study of the patient's stomach six months post-operatively disclosed a scar at the site of excision. An alcohol meal failed to cause



the secretion of hydrochloric acid, and further stimulation by subcutaneous injection of 0.5 mg. of histamine base also failed to cause the secretion of hydrochloric acid. The patient has no abdominal symptoms. The rheumatoid arthritis is satisfactorily controlled by 4 mg. of prednisolone daily.

### SUMMARY

A woman with severe rheumatoid arthritis had been known to have achlorhydria for a long time. During phenylbutazone therapy she developed pain suggesting peptic ulcer. An x-ray study did not demonstrate an ulcer. The pain ceased on stopping phenylbutazone.

Eight months later, while taking prednisone, the patient again had ulcer distress. X-ray and gastroscopic demonstration of a gastric ulcer led to its excision. The abdominal symptoms ceased. It was necessary to continue prednisolone for six weeks. Subsequently, although receiving no antirheumatic drug other than an occasional aspirin tablet, the patient has experienced a complete remission of her arthritis and of her gastric symptoms.\*

### DISCUSSION

These experiences led to the presumption that phenylbutazone, or prednisolone, or both, were instrumental in causing a benign ("peptic") ulcer in two women with achlorhydria.

In the past I have had two patients with well documented achlorhydria die of "peptic" ulcer of the stomach. Both were men and alcoholics. One had lues and died of perforation of the ulcer, the other died of hemorrhage from the ulcer. Neither patient had hepatic cirrhosis. In both instances the ulcers were demonstrated at autopsy as benign.

Hydrochloric acid is currently accorded the outstanding role in the causation of ulcers in the stomach and duodenum. Corticosteroids exert a hemorrhagic as well as a thrombotic influence. Selye's "stress" with hypercorticism may thus exert its effect in the Virchow manner by implementing the vascular changes.

The role of acid in the pathogenesis can be seriously challenged. Occasionally one can temporarily fail to detect "free" hydrochloric acid in a patient with obstruction in the duodenum or stomach with a profuse watery secretion ("catarrh of stagnation"). Our patients did not have these complications. Hypochlorhydria or achlorhydria is common in patients with rheumatoid arthritis, and could be taken as evidence supporting the hypocorticism held by some to explain the success of steroid therapy in this form of joint disease.

These cases offer further evidence that the pathogenesis of at least some "peptic" ulcers is not related to the presence of hydrochloric acid, and that the role ascribed to the hydrochloric acid in ulcer production can be challenged.

\* Another woman, with degenerative arthritis of her knees, received cortisone and phenylbutazone. She almost duplicated the above symptoms. She showed achlorhydria as determined by an alcohol meal and histamine administration. A benign gastric ulcer developed which required excision. The ulcer was histologically benign.

## SUMMARIO IN INTERLINGUA

Le causa de ulcres gastric o duodenal es incognoscite. Factores vascular, neurogene, e hormonal ha essite mentionate como explication de illos. Le adjectivo "peptic" reflecte le emphase que es characteristicamente placiante super le concepto que le secretiones del stomacho produce ulcres gastric e duodenal e effectua lor chronicitate.

Le question del rolo etiologic de acido chlorhydric in le phenomeno de ulcere peptic es discutite perennemente. "Sin acido nulle ulcere" es un ancian sed persistentemente mantenite axioma. Illo es le principio justificatori de omne tractamento, medical si ben como chirurgic.

Il ha occurrite que ulcres del stomacho e del duodeno se disveloppava post lesiones intracranial e post ardituras. Ulcres que occorre durante therapia con le moderne adrenocorticosteroides prednisona e prednisolona es reportate de plus in plus frequentemente. Le datos demonstrante que un augmentate secretion de acido chlorhydric e de pepsinogeno resulta del administration de corticosteroides remane controverse.

Es reportate le caso de un patiente, previamente sin ulcere, con achlorhydria persistente, qui disveloppava un ulcere gastric que exhibiva le typic histopathologia que es usual in chronic ulcere peptic.

Isto demonstra que un typic ulcere peptic pote disveloppavar se sin acido chlorhydric. Corticosteroides es capace a disveloppavar un typic ulcere peptic in un patiente sin acido chlorhydric. Iste constatation deberea alterar nostre conception del etiologia de ulcere peptic. Le caso hic reportate demonstra le importantia de corticosteroides in le pathogenese de ulcres.

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## DISSECTING ANEURYSM OF THE INNOMINATE ARTERY WITH BONE FORMATION COMPLICATED BY CEREBRAL INFARCTION\*

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THE purpose of this report is to call attention to a case of dissecting aneurysm of the innominate artery which to our knowledge is the first such case to be published. In the literature, aneurysms of the innominate artery are described as being of the saccular type when situated distally, and of the fusiform type when involving the junction of the innominate artery and the aorta. No mention was found of a dissecting aneurysm of this artery.

### CASE REPORT

A 69 year old housewife was admitted to the Methodist Episcopal Hospital on September 7, 1956, because of weakness and slurring speech.

The patient had been in her usual state of good health until five hours prior to admission, when she experienced sharp pain in the right temple, followed by weakness and dizziness. She fell to the floor but did not lose consciousness. She promptly arose and rested. Her family physician sent her to the hospital. On the way, she became nauseated and vomited.

Physical examination revealed an obese white female with slurred speech. Severe pulmonary edema was audible. The temperature was normal; pulse, 54; respirations, 24; blood pressure, 140/62 mm. of Hg. The right pupil was dilated and responded poorly to light. There was a decrease of the nasolabial folds on the left, with drooping of the corner of the mouth. Deviation of the tongue to the left was also noted. There was no nuchal rigidity. The heart showed no enlargement to percussion. Cardiac sounds could not be heard, as they were masked by the moist râles. The abdomen revealed the scar of a previous cholecystectomy. The liver was 5.3 cm. below the right costal margin. The spleen and kidneys were not palpable. No peripheral edema was observed. Neurologic examination, aside from the above, revealed total sensory loss and weakness of the left side of the body. There was no Babinski or ankle clonus. Deep tendon reflexes were equal and active on both sides.

Laboratory data revealed an initial hemoglobin of 11.9 gm. White blood count was 14,500, with a normal differential. On the twelfth hospital day the white blood count rose to 23,700, with 74% mature segmented polymorphonuclears, 11% stabs and 15% lymphocytes. Fasting blood sugar was normal on admission and rose to 206 mg.% on the fourteenth hospital day. Blood urea nitrogen on first admission was normal. However, a progressive series of examinations revealed 78 mg.%, 91 mg.%, 165 mg.% and 197 mg.% from the seventh to the fourteenth day of illness. Creatinine was 2.7 mg.%. Plasma CO<sub>2</sub> combining power was 63 vol.% on the first

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examination and decreased to 41 vol.% on the fourteenth hospital day. Serum chlorides were normal, and potassium and sodium were slightly elevated. The total protein was 5.4 gm.%, with a normal albumin and globulin ratio. The result of the serologic test for syphilis as performed with the Venereal Disease Research Laboratory (VDRL) antigen was weakly reactive. Serologic examination on the seventh hospital day was nonreactive to VDRL but reactive to Kolmer "8 units." Electrocardiographic tracings indicated myocardial damage, the result of coronary artery disease. The spinal fluid was bloody, due to a traumatic tap.

On the first hospital day the clinical picture changed. The patient became semicomatose. She tried to open her eyes when aroused. There was ptosis of the right eyelid, with pinpoint constriction of both pupils. The left corneal reflexes were absent. Drooping of the left corner of the mouth with deviation of the tongue to the left was still present. There was left flaccid hemiplegia, with absent deep tendon reflexes and weakly present left plantar reflex. Left hemihypaesthesia, including the face, was also observed. The patient constantly rubbed the right side of her head. There was no nuchal rigidity. No bruit was heard over the head or neck. Heart sounds were clearly audible, with regular sinus rhythm.

The course following was eventful. The patient never recovered from coma, although she responded to commands. She developed diarrhea after Terramycin and Albamycin therapy, but this was promptly controlled by Chlorostrep administration. The temperature fluctuated from 102° F. to 104.3° F. On the thirteenth hospital day the fluid output decreased, with concomitant edema of the lower extremities and uremia; pulmonary edema supervened. Despite vigorous supportive measures, the patient died on the seventeenth hospital day.

Autopsy disclosed a dilated innominate artery 3.5 cm. in diameter. This dilatation extended upward for at least 6 cm., at which point further dissection was not carried out because of the possibility of disfiguring the body. The structure was extremely firm in consistency. When the vessel was opened a large antemortem thrombus extruded from it. Further dissection revealed that this thrombus was present within the media of the vessel, and that the lumen of the vessel itself had been compressed by this thrombotic mass. The arterial aneurysm extended upward as far as the vessel had been excised and downward to the aorta surrounding the ostium. This portion of the aorta immediately surrounding the ostium of the innominate artery showed antemortem thrombus. There was a small area about 3 cm. in length proximal to this area on the posterior surface of the aorta which showed a small amount of blood within the adventitia. The remaining portion of the aorta showed a rather severe degree of atherosclerosis with ulceration and calcification, but no evidence of medial dissection. There was also an antemortem thrombus within the branch of the pulmonary artery leading to the right lower lobe of the lungs. This thrombus formation started immediately after the bifurcation of the main vessels and had extended downward into the finer ramifications for a distance of approximately 7 cm. In the brain the subdural space was free of blood, but a thin layer of blood-tinged fluid was found in the subarachnoid space. Serial section showed a cystic cavity in the right temporal lobe measuring up to 4.5 cm. in diameter. This was lined by a shaggy, tanned membrane.

Microscopic examination revealed mucoid degeneration of the media of the aorta and innominate artery. An interesting finding was the presence of bone in the outer layers of the media and of the adventitia in the areas of the medial section of the innominate artery. There was also a zone of chronic inflammation containing a considerable amount of hemosiderin. Other important microscopic findings were cerebral infarction and thrombosis of the pulmonary artery leading to the right lower lobe of the lungs.

## DISCUSSION

Aneurysms of the innominate artery comprise about 3% of all aneurysms, and were mentioned in the medical literature as early as the second century A. D.

Aneurysms of the innominate artery may be divided into the traumatic and atraumatic types. Traumatic aneurysms of the innominate artery have been reported by Linskog,<sup>2</sup> Rundle,<sup>4</sup> Schumaker<sup>3</sup> and others, with successful treatment by surgical ligation of the innominate, subclavian and common carotid arteries. In their total of 107 cases the diagnosis was readily made, since small, penetrating wounds of the neck are usually responsible for the formation of such aneurysms. Patients with larger wounds exsanguinate before surgical intervention is possible.

The most common cause of atraumatic aneurysms of the innominate artery is syphilis.<sup>6</sup> Arteriosclerosis as a cause is very uncommon, and definite authentication is difficult to find. Coarctation of the aorta and rheumatic fever have been mentioned as associated pathologic entities.

The pathogenesis of all dissecting arterial aneurysms is probably similar. Sailer,<sup>6</sup> Amromin, Schlichter and Solway,<sup>7</sup> Erdheim,<sup>8</sup> McCloskey and Chu<sup>9</sup> and others made detailed reports on the pathologic aspects of dissecting aneurysms, and suggested that the weakened condition of the medial coat is associated with cystic medionecrosis and rupture of the vasa vasorum, resulting in intramural hematoma. The hematoma spreads through the points of least resistance of the vessel. It is presumed that, in our case, the bone formation in the outer layers of the media and of the adventitia is due to the metaplastic changes of one of the connective tissues around the site of injury, giving rise to bone formation. However, the area of necrosis may become calcified and stimulate the formation of granulation tissue, where some of the connective tissue cells act as osteoblasts. Also, the presence of the unabsorbed hemosiderin may influence the metaplastic changes of the surrounding areas to form bone. McCloskey and Chu<sup>9</sup> reported a case of aortic dissecting aneurysm showing an intimal tear in the ascending aorta and dissection of the medial coat of the innominate artery, producing occlusion of the lumen. In our case it could be possible that the dissection might have originated from the ascending aorta, as there was a small amount of blood within the adventitia proximal to the ostium of the innominate artery. However, we may also conclude that it had originated in the innominate artery itself, as shown by localized area of ossification in the innominate artery, which could represent a previous small dissection with medial hemorrhage, since the area was surrounded by a zone of chronic inflammation containing a considerable amount of hemosiderin. The dissection therefore might have spread upward to the carotid artery and downward to the aorta.

## SUMMARY AND CONCLUSIONS

The diagnosis of aneurysm of the innominate artery may be confused with carotid artery thrombosis. Although pain radiating to the right shoulder, or to both shoulders, and dyspnea are the most common symptoms, they are not diagnostic. Cough, hoarseness and dysphagia may also occur as a result of pressure upon the right recurrent laryngeal nerve. Headache, hemiparesis, hemiplegia and irregularity of the pupils may contribute to the clinical picture.



X-ray and fluoroscopy show a soft tissue density in the right paratracheal region arising at the level of the aortic arch shadow.<sup>10</sup> The above findings may be present in both aneurysm of the innominate artery and carotid artery thrombosis.

A further diagnostic aid is external palpation of the carotid artery pulsation, as well as palpation of the lateral walls of the pharynx for its impulse. Absence of pulsations should arouse a high index of suspicion relative to occlusion of either the innominate or the carotid artery, or both.

Angiocardiography as an aid in diagnosis has not been attended with great success because of the relatively small lumen of the innominate artery as compared to that of the aorta.<sup>5</sup> It may serve to differentiate between aneurysms and other conditions which produce superior mediastinal widening on conventional roentgenograms.

Svein and Hollenhorst<sup>11</sup> offer the measurement of the pressures of retinal arteries as a means of determining the patency of the external or internal carotid arteries. With the use of the ophthalmodynamometer of Billiart, they measured the pressures of the retinal arteries after ligation or occlusion of the carotid artery. From their data they considered that when a significant difference in pressures is noted in retinal arteries, either the internal carotid or the common carotid artery on the side of the lowered pressure is occluded, or the blood flow is severely impaired in these arteries.

The diagnosis of dissecting aneurysm of the innominate artery is difficult, as there are no specific distinguishing features which differentiate this pathologic entity from carotid artery thrombosis. Careful history and physical examination correlated with x-rays and special studies such as angiocardiography and retinal artery pressures may afford the opportunity to make antemortem diagnosis. The authors suggest the external (cervical) and internal (pharyngeal wall) palpation of the carotid artery in all instances of hemiplegia, as this may lead one to the causative factor, as is reported here. The therapeutic management would not be altered if the innominate artery were occluded. However, prompt surgical evaluation is advised in the event of internal carotid artery thrombosis.

#### SUMMARY IN INTERLINGUA

Es reportate un caso de aneurysma dissecante del arteria innominate con formation de osso—in tanto que nos lo sape, le prime tal caso unquam publicate.

Un menagera de 69 annos de etate esseva admittite al Hospital Methodist a causa de debilitate e indistinctitate de parola. Illa habeva gaudite de su usual stato de bon sanitate usque a cinque horas ante su hospitalisation, a qual tempore illa experienciava acute dolores in su tempora dextere, con vertigine e caditas. In route al hospital, illa habeva episodios de nausea e vomito. Le dolores in le tempora dextere deveniva sever. Le patiente disveloppava un marcate hemiplegia sinistre. Illa deveniva comatose e habeva episodios de febrilitate usque a 40 C. In despecto de energic mesuras supportative, le patiente remaneva comatose. Su condition se deteriorava rapidamente, complicate per edema pulmonar e uremia. Illa moriva le dece-septime die de su soggiorno al hospital.

Le necropsia revelava un dilatate arteria innominate que se extendeva ab le aorta usque al arteria carotidic. Quando le arteria esseva aperite, un grande thrombo de

formation ante morte se extrudeva ab illo. Dissection additional demonstrava que le thrombo esseva presente in le media del vaso e que su massa habeva comprime le lumine del vaso. Le aorta exhibiva sever grados de atherosclerosis sed nulle dissection medial. Le examine microscopic monstrava un degeneration mucoide del aorta e del arteria innominate, con le presentia de formation de osso in le media exterior e in le adventitia in le section del arteria innominate.

Il es possibile que in iste caso le dissection prendeva su origine in le aorta ascendente, proque un micre quantitate de sanguine esseva trovate intra le adventitia, proximal al ostio del arteria innominate. Tamen, nos nos senti justificate in asserer que illo se originava in le arteria innominate mesme, viste le area localisate del ossification que ben pote representar un micre dissection ancian con hemorrhagia medial, proque le area esseva circumjacite per un zona de inflammation chronic continente un quantitate considerabile de hemosiderina. Per consequente, on pote supponer que le dissection se extendeva in alto verso le arteria carotidic e in basso verso le aorta.

Un meticulose scrutinio del historia de un patiente particular e un detaliate examine physic, correlationate con roentgenographia e studios special del typo de angiocardigraphia e determinaciones del pression de arteria retinal, permette possibilmente establir le diagnose ante morte per differentiar iste entitate ab thrombose del arteria carotidic.

Le autores suggere pro omne casos de hemiplegia un examine del arteria carotidic per palpation externe (cervical) e interne (al pariete pharyngee), proque iste manovra pote resultar in le discoperta del factor causative, como le caso hic reportate lo illustra.

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**ESSENTIAL HYPERLIPEMIA \***

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ESSENTIAL hyperlipemia is a disease of rather recent recognition. Described first by Holt et al. in 1939,<sup>11</sup> it was repeatedly reported in pediatric literature as a relatively benign condition. Almost 10 years later, reports from Scandinavia and America indicated a high incidence of coronary heart disease at a relatively early age in adults. An excellent descriptive analysis of the condition was published by Joyner<sup>18</sup> in 1953. More recent reports only emphasize the frequency of associated coronary atherosclerosis (10 of 17 case reports).<sup>15, 17</sup>

The condition has definite familial tendencies, and no racial predilection can be anticipated on the basis of reported cases. It is manifested by a milky serum, high levels of neutral fat (1,000 to 4,000 mg. %), and associated elevated levels of serum cholesterol and other lipids. The opalescence of the serum is due to the optical density of large chylomicrons of neutral fat which are loosely attached to phospholipids.<sup>1</sup> Clinically, it is recognized by xanthomas in the skin—usually over the knees, buttocks, and extensor surfaces of the arms—frequent hepatic and splenic enlargement,<sup>8, 9, 10, 12, 14, 16, 18</sup> lipemia retinalis, and occasional bouts of abdominal pain. The abdominal pain has been severe enough to lead to laparotomy.<sup>2</sup> The only deaths indirectly attributed to the disease have been due to myocardial infarctions. There are many points of similarity with primary hypercholesteremic xanthomatosis. The appearance of the skin lesions is of some differential value. The xanthomas are said to be eruptive and surrounded by a pink areola in primary hyperlipemia, and tuberous and associated with tendons in primary hypercholesteremic xanthomatosis. The most significant differential point is the absence of milky serum and the normal levels of neutral fat with elevated serum cholesterol in primary hypercholesteremic xanthomatosis.

At present, practical management of essential hyperlipemia is entirely dietary. Attempts at achieving a permanent reduction in neutral fat by means other than a low fat diet have failed.<sup>11</sup>

Neutral fat was temporarily reduced in the course of treatment of one patient with essential hyperlipemia as well as incidental gout by ACTH.<sup>6</sup> Intravenous heparin and intravenous fat infusions have also temporarily lowered the serum lipid level.<sup>15</sup>

Disappearance of skin lesions, cessation of angina, and disappearance of lipemia retinalis have all occurred with strict limitation of fat intake. This, too, differentiates primary hyperlipemia from primary hypercholesteremic xanthomatosis, and makes it a far more hopeful condition prognostically with reference to the coronary atherosclerosis.

In the case reported we have demonstrated not only the elevated fasting levels of neutral fat and fatty acids before treatment but also the "fat tolerance test" as described by Dr. Charles Wilkinson.<sup>20</sup> Of particular interest is the

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remarkable response made by the patient to a diet in which fat was restricted to less than 20 gm./day. The xanthomas of the skin disappeared completely, and the serum neutral fat and fatty acid levels returned to the normal range. After this, during a trial period when one meal a day contained a reasonable amount of fat, the serum levels of neutral fat again rose to abnormally high levels.

#### CASE REPORT

A white American male, age 36 years, first came under observation on December 14, 1954, with the following history: He had been completely well except for one minor episode of diarrhea in 1942, until, while in the Armed Services in 1945, he developed a rash over the arms and had repeated episodes of diarrhea. In these episodes the diarrhea was abrupt in onset, watery in consistency, and accompanied by a sense of urgency. There was no accompanying severe pain in the abdomen, but rather a generalized sensation of "soreness." The episodes apparently occurred whenever troop movement was impending, and he recalled that diarrhea on those occasions was accompanied by nausea and vomiting. There was never any blood in the stool or in the vomitus. He was admitted to Army hospitals on at least six occasions during his Army career. On each occasion he was studied for possible appendicitis, and blood counts were done, and were "probably" never abnormal. On one of his admissions to the neuropsychiatric ward he was given insulin shock therapy for one week and sent back to duty. He found that paregoric and bismuth gave him symptomatic relief very promptly. During one period of four weeks' hospitalization for observation there was no recurrence of diarrhea and he was discharged. He returned to Ann Arbor in 1946 and was seen at the Dermatology Clinic, where a diagnosis of xanthoma tuberosum multiplex was made. A biopsy of one of the lesions was made on October 16, 1946, and pathologists interpreted this section as showing "xanthoma multiplex." Lipemia retinalis was recognized in the Department of Ophthalmology. On October 18, 1946, a serum cholesterol was 408 mg.%, and the glucose tolerance test was normal. On December 17, 1946, a serum cholesterol was 170 mg.% after he had been on a low fat diet. He was again seen in August, 1953, in the Dermatology Clinic at the University Hospital, where a postprandial blood sugar was 72 mg.%. Total serum cholesterol was 485 mg.% and the Kahn test was negative. No electrocardiogram was performed at that time.

At no time has the patient described any chest sensations suggestive of angina. Gastrointestinal x-rays were reported as negative in 1946.

Several members of the family, including his mother, one sister and one maternal uncle, had diabetes. His father died of a heart attack at age 70, and one sister, age 45, had xanthelasma of the eyelids. His first child died at the age of one year of Tay-Sachs disease. A second infant is entirely normal.

On examination on December 15, 1954, the patient's height was 67.5 inches; weight, 196.5 pounds; blood pressure, 140/80 mm. of Hg. He was moderately obese. Numerous elevated yellowish plaques were present over the buttocks, elbows, knees, Achilles tendon and popliteal space. The lesions were not coalescent. They were not surrounded by erythema, and were not tender or pruritic. There were also lesions of seborrheic dermatitis at the hair line, in the eyebrows and over the scalp. An arcus presenilis was present in the cornea. The fundusoscopic examination showed no evidence of lipemia retinalis at the time of examination. The remainder of the head and neck was normal. The heart was normal. The lungs were clear. The abdomen was soft and nontender. There was no enlargement of the kidney, liver or spleen.

Laboratory examinations revealed the following: hemoglobin 14.7 gm.; red blood count, 4,930,000; white blood count, 7,750. A differential blood count was normal.

TABLE 1  
Serum Fat Analyses in a Male with Essential Hyperlipemia

Date		Total Choles- terol	Free Choles- terol	Choles- terol Esters	% Choles- terol Esters	Lipo- pro- tein	Phos- pho- lipid	Total Fatty Acids mg./ 100 c.c.	Neutral Fat	
(All Values Expressed in mg./100 c.c.)										
1/31/55	Fasting	643	299	344	53	34	850	6,280	5,786	Fat tolerance test (Fasting patient given 76 gm. of dietary fat)
	1 hour	690				32	800	6,550		
	3 hours	620				32	800	6,550		
	6 hours	700				35	825	7,150		
	9 hours	663				30	750	6,200		
	12 hours	668				29	725	5,750		
	15 hours	654				29	725	5,080		
2/1/55	24 hours	689				28	700	4,600		After seven months on low fat diet
	28 hours	648				27	675	3,440		
8/30/55		144	46	98	61	8.8	220	551	355	After seven months' allow- ance of one meal of normal fat intake per day
3/6/56		462	188	274	59	18.0	450	1,875	1,460	

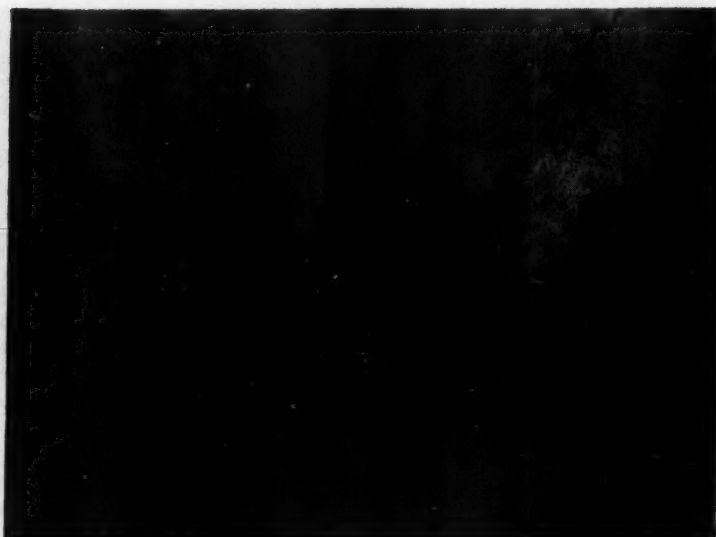


FIG. 1. Skin lesions of a xanthomatous nature in essential hyperlipemia.





FIG. 2. Skin lesions of a xanthomatous nature in essential hyperlipemia.

Urinalysis was completely negative. Corrected sedimentation rate was 6.0 mm./hr. Serum obtained for a Kahn examination was milky. A fat tolerance test was conducted, as outlined by Dr. Charles Wilkinson, in which a fasting blood specimen was followed by ingestion of a measured amount of fat, totaling 76.3 gm. The accompany-



FIG. 5. Skin lesions of a xanthomatous nature in essential hyperlipemia.



FIG. 4. Skin lesions of a xanthomatous nature in essential hyperlipemia.



FIG. 5. Skin lesions of a xanthomatous nature in essential hyperlipemia.

ing table (table 1) gives the results of this fat tolerance test. An electrocardiogram was entirely normal.

Following the examination the patient was placed on a diet in which the fat was restricted to less than 20 gm. per day. Seven months later a single blood specimen indicated a remarkable drop in the serum lipids as reported in the accompanying table. Over that period of seven months the xanthomas in the skin (figures 1 to 5) had gradually disappeared. The patient lost weight (16 pounds), and reported himself to be in good health. At that time he was allowed to have one meal a day containing a usual amount of fat; at the same time, the fat at breakfast and lunch was rigidly restricted to less than 10 gm. per day. According to the observations of C. F. Wilkinson, Jr., this is consistent with maintenance of a normal serum fat level in many cases of essential hyperlipemia.

On March 6, 1956, seven months later, while the patient was still following the program as outlined, the serum lipids had risen to pathologic levels but not to the pre-treatment levels. No new skin lesions appeared. He has therefore been advised to follow the original diet, restricting fat to less than 20 gm. per day. It is planned later to allow a normal meal containing fat every other day.

#### SUMMARY

A case of essential hyperlipemia (the forty-sixth) is reported to emphasize the ease of recognition: milky fasting serum; frequency of associated coronary atherosclerosis, and excellent response to dietary management.

#### ADDENDUM

A second case has recently been observed by one of the authors (B. C. P.), the diagnosis prompted by the singular observation of a milky fasting serum without other clinical manifestations of the disease. The serum neutral fat was 1530 mg.%, and total serum cholesterol, 285 mg.%.

#### ACKNOWLEDGMENT

We wish to thank Dr. Charles F. Wilkinson, Jr., for making the serum fat analyses possible and for helpful suggestions.

#### SUMMARIO IN INTERLINGUA

Es reportate un caso de hyperlipemia essential, exhibiente initialmente un alte nivello del total lipido seral, sequite per un responsa satisfactori a un dieta a basse contento de grassia. Le restriction dietari a 20 g de grassia per die resultava, in le curso de un periodo de septe menses, in un reduction del nivello seral de grassia neutre ab 5786 a 355 mg per 100 cm<sup>3</sup>. Le lesiones cutanee associate con hyperlipemia dispaveva completamente e non recurreva, ben que experimentos dietari permitteva subsequentemente un augmento del grassia neutre in le sero usque al nivello de 1460 mg per 100 cm<sup>3</sup>. Esseva concludite que le autorisation de un repasto diurne a ingestion normal de grassia non esseva compatibile con le mantenentia de un normal nivello seral de grassia neutre in le caso del patiente particular qui es hic describite.

Iste observation de un initialmente excellente responsa a solmente un restriction dietari permette le spero que morbo coronari atheromatose del typo associate con hyperlipemia essential va provar se reversibile. Altere morbos del metabolismo

lipidic es cognoscitamente associate con atherosclerosis coronari. Un tal es primari xanthomatosis hypercholesterolemic. Inter le conditiones de iste gruppo, hyperlipemia essential es le sol que responde cognoscitamente al restriction del contento de grassia in le dieta. Illo es facilmente identificate per le constatacion de sero lactose in stato jejun.

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## SCHISTOSOMA MANSONI INFECTION IN TWO PUERTO RICAN PRISONERS \*

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EVERY male native-born Puerto Rican incarcerated in the United States Penitentiary at Lewisburg, Pennsylvania (population, 1,200), during the two years 1954-1956, has been examined in an attempt at better evaluation of the incidence of *Schistosoma mansoni*. Sixteen men were found to have spent the major part of their childhood and adolescence on the island. Two still harbored the parasite. Not included in this report is a third case, that of a 30 year old Spanish-born (Basque-Gurpuzcoa) male who may have acquired the infection in Venezuela during the years 1948 to 1952.

### CASE REPORTS

*Case 1.* A 25 year old male, born in Anasco, Puerto Rico. An only child, he had no knowledge of his father, who had separated from his mother shortly after his birth. His mother has been living in New York City for some 15 years and is asymptomatic, but has never been carefully examined for schistosome infestation.

During his childhood the patient often went swimming in two rivers near his home, the Rio Grande and the Rio Hando and their tributaries. He often went wading in the shallow, sluggish water near shore until he was about seven or nine years old, when he began swimming in the deeper tributaries. This continued until age 14 (1945), when he moved to New York City with his mother. Toilet facilities and sanitation were primitive in his home in Puerto Rico.

The patient completed the second year of high school in New York City, and then took routine labor jobs until he entered the U. S. Army in March, 1947. After basic training he was stationed in the Panama Canal Zone until December, 1947, when he was transferred to the Ramey Air Force Base in Puerto Rico. He remained there two years. During these two years he did not swim, nor was he subjected to unsanitary toilet conditions. He returned to New York City following discharge from service, and was soon involved in the sale and use of narcotics. He was admitted to the U. S. Public Health Service Hospital at Lexington, Kentucky, for a period of six months. In September, 1951, because of the above charges, he was sent to the Greenhaven State Prison, and later to Sing Sing. Upon release in November, 1953, he returned to New York City. He was working as a construction foreman when he again became involved in similar charges, which were responsible for his admission into the penitentiary at Lewisburg in July, 1955.

On careful questioning as to his childhood and adolescence the patient was unable to recall any episodes of urticaria, pruritus or other manifestations of cercarial dermatitis.

While attending a graduation party at the end of his first year in high school the patient drank a large quantity of alcohol, which resulted in rather severe generalized abdominal cramping pain. He experienced abdominal distention and many loose, unformed stools. He became very weak, and remained at home for a period of two months. During this time he lost approximately 30 pounds in weight. The attack

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may have been associated with ascariasis, as he recalls passage of several "large worms" in this period. Stool examinations were performed at intervals while he was attending school. He was told of an anemia and was treated with iron tablets.

The medical history was otherwise uneventful until the patient's admission into the 330th Station Hospital at the Ramey Air Force Base in Puerto Rico in March, 1948. At this time a diagnosis of gonorrhea with prostatitis was made. He was re-admitted in August, 1948, for an acute pharyngitis, at which time a hemolytic streptococcus was isolated. As a routine procedure, stool examination was performed. Hookworm, strongyloides, trichuris and the eggs of *Schistosoma mansoni* were identified. Hematologic examinations are recorded in table 1. To be noted was the presence of only 2% eosinophils, despite multiple parasitic infestations. Serologic tests for syphilis were repeatedly negative. He was treated with tetrachlorethylene, hexylresorcinol and gentian violet capsules.

On September 1, 1948, the patient received 1.5 c.c. of stibophen (Fuadin). The instructions were then to continue the therapy until September 16. Unfortunately, because of a change of staff, therapy was discontinued after the third injection and the patient was released.

He re-entered the 330th Station Hospital May 10, 1949, and was there until July 13, 1949, with the diagnosis of infectious hepatitis. He denied use of narcotics, or receipt of any injections, immunizations, blood or other oral hepatotoxic medication. His complaints at the time were typical; they consisted of anorexia, vague upper abdominal pain, and passage of dark urine. An enlarged, tender liver two fingerbreadths below the costal margin was noted. For further laboratory work, see table 1. Admission urine revealed a urobilinogen of 1:100. At this time an eosinophilia was noted of 5 to 10%. This was the only time while he was in the Army or during his institutionalization here that this was noted. The bilirubinemia, the early flocculation tests, the absence of fever after the first week, and the general course favored a diagnosis of hepatitis. He was treated with bed-rest and a high-calorie diet.

He was received in the U. S. Penitentiary, Lewisburg, Pennsylvania, on July 20, 1955. At that time he weighed 161 pounds. He denied attacks of diarrhea, or passage of bloody mucus in rectal discharges. His only gastrointestinal complaints were of "gas" and of fullness after eating, associated with a generalized feeling of abdominal distention.

Because of his Puerto Rican origin, stool examination and proctoscopy were performed immediately upon his arrival. With the use of a routine acid-ether technic, and selection of some of the mucoid material surrounding the outer portions of the stool, embryonated eggs of *Schistosoma mansoni* (figure 1) were readily demonstrated, even in the nonconcentrated specimen. Proctoscopic material was found to be ideal, containing little organic debris to interfere with rapid diagnosis. The eggs were found intact in the aspirate, and were of excellent diagnostic quality.

The rectal mucosa on proctoscopy was found to be diffusely involved, with a friable, granular appearance; multiple pinpoint hemorrhages were noted throughout, and the mucosa bled readily with the slightest trauma. All the rectal valves were affected. The entire mucosa appeared to be edematous. No distinct areas of ulceration were noted, but the polypoid mucosa in several crypts contained shallow deposits of blood-tinged mucus at its base. The appearance was similar to that of an acute ulcerative colitis. The rectal ampulla was similarly involved. The sigmoid above this area was intact, and the instrument could be advanced 20 cm.

Rectal biopsy was obtained from three sites. An attempt was made to obtain at least one specimen from the third, or superior, rectal valve. Most specimens were taken from the anterior as well as the lateral walls. Because the cutting forceps could be readily rotated, biopsy material was obtained posteriorly as well. The

TABLE 1

Date	Hematology	BSP	Ceph. Floc.	Thymol Turbidity	Bilirubin	Icterus Index	Cholesterol /Esters	Alkaline Phosphatase	Prothrombin (100% Normal = 12.2 Sec.)	Urine
Case 1										
8/25 1948	RBC = 5.1 M. Hb. = 14 gm. per cent WBC = 5,800: 67 polys., 31 lymphs., 2 eos. Wassermann, negative		++++	4.5 units	D = .2 mg. per cent I = .8 mg. per cent	13.6				
5/20 1948*	Hematocrit: 40 per cent WBC = 5,450: 53 polys., 52 lymphs., 5-10 eos.		Trace	3 units	D = .2 mg. per cent I = .6 mg. per cent	8				Urobilinogen 1:50
6/15 1948	7 Eos.									
7/1 1948					D = .2 mg. per cent I = .7 mg. per cent					Urobilinogen 1:20

\* Hepatitis.

TABLE 1—Continued

Date	Hematology	BSP	Ceph. Floc.	Thymol Turbidity	Bilirubin	Icterus Index	Cholesterol /Esters	Alkaline Phosphatase	Prothrombin Time % Normal =12.2 Sec.)	Urine
11/20 1955	RBC=4.8 M. Hb. 15 gm. per cent Hematocrit: 45 per cent WBC=9,150: 53 polys., 43 lymphs., 1 mono., 2 eos., 1 baso.	15%	++	7 units	D = 4 mg. per cent I = .5 mg. per cent	9	244/184 mg. per cent	3.6 Bodansky units	100%	
4/1 1956	E.S.R. = 4 mm. per hour (Wintrobe)	9% (after 90 c.c. Faudin)								
Case 2										
2/6 1956	RBC=4.9 M. Hb. = 15.1 gm. per cent Hematocrit: 46 per cent WBC=7,750: 36 polys., 38 lymphs., 1 mono., 4 eos., 1 baso. E.S.R. = 5 mm. per hour (Wintrobe)	6%		2 units	D = 4 mg. per cent I = .2 mg. per cent	7	175/138 mg. per cent	2.0 Bodansky units	95%	

material was fixed in formalin as well as hematoxylin-eosin. The best preserved material was obtained with formalin. The slides were prepared and read at the National Institutes of Health.

Physical examination was entirely negative except for an asthenic and under-



FIG. 1. High power view of the *Schistosoma mansoni* egg, with the detailed structure of the embryo and flame cell visible.

nourished appearance. No adenopathy was detected. The liver was palpated at the costal margin. The spleen was not palpable.

Laboratory examinations (table 1) revealed an essentially normal hematologic picture, with no evidence of anemia, leukocytosis or eosinophilia. Liver function tests were not abnormal except for a bromsulfalein retention of 15% and a thymol

Geisinger Memorial Hospital  
Foss Clinic  
Danville, Pennsylvania

# ELECTROPHORETOGRAM

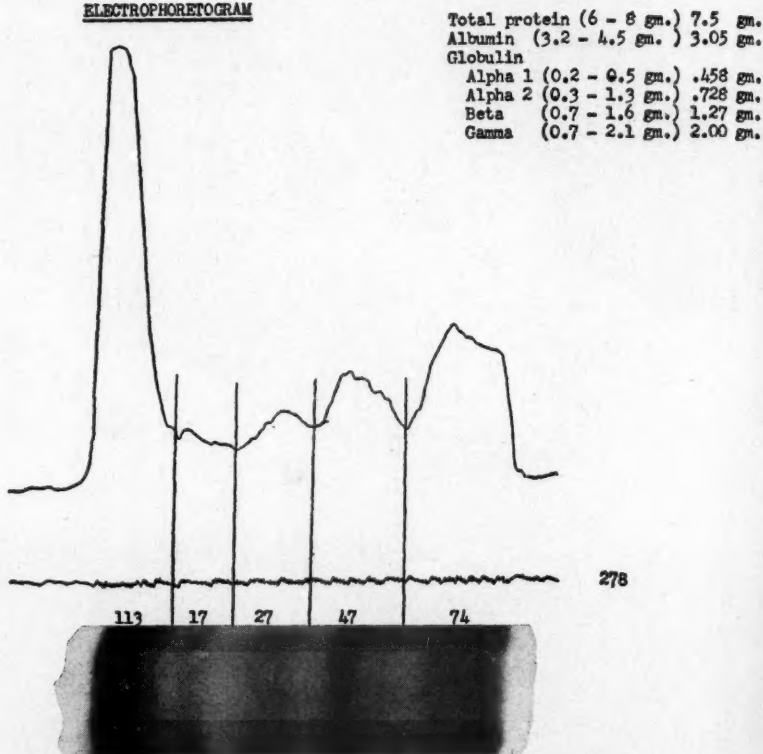


FIG. 2. Electrophoretogram of case 1, which is normal.

turbidity of seven units. Electrophoretic study obtained at the Geisinger Memorial Hospital revealed no marked protein disorder or pattern of hyperglobulinemia (figure 2).

X-ray studies including chest, barium enema, gastrointestinal and small bowel patterns gave normal findings. Gall-bladder study revealed normal concentration and emptying.

The patient received a complete course of 90 c.c. of trivalent stibophen (Fuadin) without serious reaction. Mild arthralgia and myalgia as well as some anorexia appeared during the course of therapy. Stool examination and proctoscopic aspirate

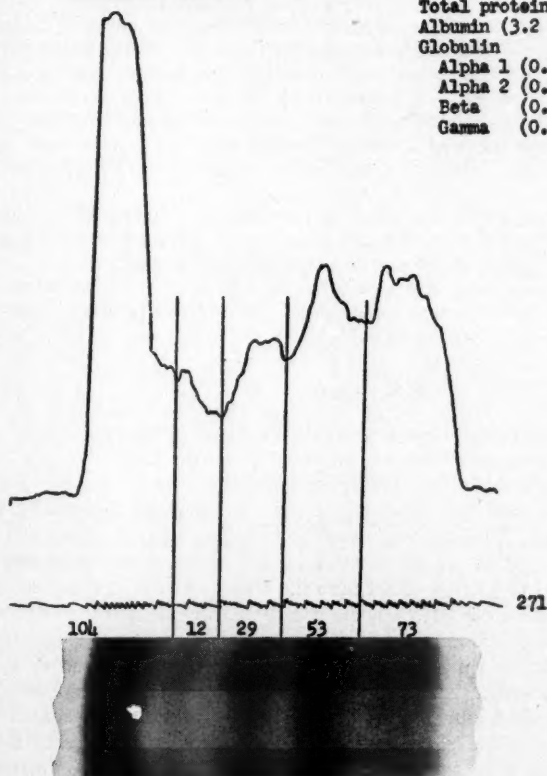


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thereafter revealed no eggs, and the proctoscopic appearance of the rectal mucosa changed to a more normal one two months after therapy. The bromsulfalein retention dropped to 9% after this course of treatment. The patient was then placed on intravenous antimony potassium tartrate, 0.5% solution, given slowly. Toxic symptoms were similar to those with the use of trivalent stibophen (Fuadin). A full course of 440 c.c. was administered.

Geisinger Memorial Hospital  
Foss Clinic  
Danville, Pennsylvania

# ELECTROPHORETOGRAM



Total protein (6 - 8 gm)	7.05 gm.
Albumin (3.2 - 4.5 gm.)	2.70 gm.
Globulin	
Alpha 1 (0.2 - 0.5 gm)	.312 gm.
Alpha 2 (0.3 - 1.3 gm)	.755 gm.
Beta (0.7 - 1.6 gm)	1.38 gm.
Gamma (0.7 - 2.1 gm)	1.90 gm.

FIG. 3. Electrophoretogram of case 2, which shows no hyperglobulinemia.

*Case 2.* A 27 year old Puerto Rican male was born in Rio Grande, approximately 125 miles from Anasco, the birthplace of case 1. The general health of the patient's mother and siblings is unknown. He lived with his father (who was asymptomatic) until age 11, when he moved to San Juan, Puerto Rico, where he stayed until age 21. As in case 1, childhood and early adolescence were often spent swimming in adjacent stagnant streams. Sanitary facilities available at this period

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were primitive. At age 21 he came to New York City, where he worked as a laborer on the waterfront. This was the same type of work he had done in Puerto Rico.

There was no history of diarrhea in childhood or as an adult. Occasional "gas" or bloating attacks were noted, often at night. These attacks were of a generalized, migratory nature, and were relieved with strong cathartics. Bowel movements were ordinarily regular and the stools well formed, without blood or severe constipation. Occasionally, with a large intake of milk, soft, formed stools were passed. Weight had remained stationary in the last 10 years (approximately 153 pounds).

The patient had been incarcerated in Auburn State Prison, New York, from 1950 to 1951, and had been treated for drug addiction in Lexington, Kentucky, for five months. He was received in the U. S. Penitentiary, Lewisburg, Pennsylvania, in December, 1955. Physical examination revealed nothing remarkable. Laboratory work is shown in table 1. All x-ray studies were normal. Stool examination and proctoscopy were done immediately on admission as a part of the routine study. The proctoscopic picture of the rectum was essentially the same as that in case 1, except for evidence of a more acute inflammatory reaction. The rectum was exquisitely tender, and the instrument could not be advanced above the rectosigmoid junction. Again proctoscopic aspirate was loaded with the schistosoma eggs. Viable eggs were identified. Positive rectal biopsy material was also obtained, as in case 1.

As noted, the results of all laboratory examinations, including liver function studies, were essentially within normal limits (table 1). The electrophoretic pattern is shown in figure 3. Again, normal protein partition was demonstrated.

No elevation of white count, eosinophils, serum bilirubin or bromsulfalein was noted following the course of therapy. Stools and rectal biopsy returned to normal. The mucosal picture also reverted to normal.

#### DISCUSSION

Case histories of two native-born Puerto Ricans found to harbor *Schistosoma mansoni* have been presented. As can be noted from the histories, they were both essentially asymptomatic, or mildly symptomatic, with complaints of a vague nature which would not have suggested the diagnosis, especially with negative x-ray studies. The contention of Lyons and Benson<sup>1</sup> that all hospitalized native-born Puerto Ricans should have routine rectal examinations, stool studies and rectal biopsies to determine the true incidence is thus reemphasized. Table 2 lists the 16 Puerto Ricans mentioned in the opening paragraph of this paper, as well as the Spaniard who may have become infested in Venezuela and who is not included in this report. As can be seen, they come from representative areas of the entire island, and all had many years of exposure and adequate opportunity to acquire the disease. Palmer, Ricketts and Maimon<sup>2</sup> in 1946 estimated that 10% of apparently healthy young male Puerto Ricans called up for induction were found to have the infection. A similar incidence has been quoted for recent New York City immigrants.

Figure 4 represents a diagrammatic portrayal of the prevalence of *Schistosoma mansoni* infection on the island as estimated by Dr. J. F. Maldonado, of Santurce, Puerto Rico, and represents his most recent study of the geographic distribution. The report is based upon a single stool examination in each individual, and thus can be taken only as a rough approximation. As noted, case 1 came from Anasco, an area of relatively scarce disease (2.7%) and case 2 came

from Rio Grande which, being relatively far inland and unmarked on the map, also represents a less common area. The general incidence for the islands is estimated at from 10 to 12%. The streams in the interior of the island, including Anasco, Utuado and Barranquitas, as well as those at Guayama on the southern coast, and Rio-Piedras (Sabana Llana on the northern coast) are infested with *Schistosoma mansoni*.<sup>3</sup>

Most infections were noted in patients from towns where the snail *Australorbis glabratus* was prevalent, i.e., streams, rivers and other irrigation sites with sluggish or still water in a tropical or subtropical climate.

Spellberg<sup>4</sup> notes that the bulk of cases in the United States are derived from two sources: (1) immigrants from Puerto Rico (*S. mansoni*), and (2) veterans of military service in the Philippine Islands, especially Leyte, during World War II (*Schistosoma japonicum*). Most of these exposures occurred during October and November, 1944 at the time of the invasion of Leyte.

TABLE 2

Name	Birth and Place of Residence	Length of Residence	<i>S. mansoni</i>
1. E. M.	Anasco	14 years	Positive
2. J. P.	Rio Grande-San Juan	21 years	Positive
3. D. M.	San Lorenzo	11 years	Negative
4. A. S.	Aibonito	17 years	Negative
5. J. O.	Vega Baja	25 years	Negative
6. B. V.	Arecibo-Maniti	21 years	Negative
7. P. M.	Comerio	15 years	Negative
8. C. F.	Santurce	17 years	Negative
9. M. L.	Ponce	9 years	Negative
10. S. A.	Ponce	10 years	Negative
11. R. T.	Coamas	16 years	Negative
12. M. R.	Utuado	14 years	Negative
13. A. R.	Caguas	11 years	Negative
14. S. P.	Daguao	18 years	Negative
15. F. H.	Arroyo	6 years	Negative
16. B. G.	Ceiba	12 years	Negative
*17. H. I.	Basque, Spain-Venezuela	22 years	Positive

\* Not included in study, because of non-Puerto Rican origin.

All cases were studied completely, with history, physical examination, stool examination, proctoscopy and biopsy.

Craig and Faust<sup>5</sup> note Stael's estimate in 1947 of approximately 6,000,000 cases of *S. mansoni* in tropical America alone.

\* Table 2 indicates no certain method exists of anticipating or predicting which individuals are likely to be infested. Certainly all had adequate exposure and opportunity to acquire the parasite. Again, the need for a high index of suspicion is emphasized.

#### CLINICAL HISTORY

The most significant fact regarding clinical symptomatology is the relative absence of any specific complaints. Although both cases reported here gave evidence of slight malnutrition, they were not dramatically asthenic, and would readily pass for the typical inmate in the institution. Epigastric and generalized abdominal pains, with a complaint of mild distention or "gas" after meals, were the only statements of distress made by either. Neither has loose bowel move-

ments, blood in-stool, tenesmus or diarrhea. Certainly one would never make a diagnosis from these complaints, especially with negative x-ray studies.

#### LABORATORY DIAGNOSIS

*Fecal Examination:* Our most effective method of demonstrating the eggs was by aspirating mucus from the proctoscopic material. The eggs were well preserved and readily identified, without fecal debris to obscure the field. The abundant mucus, especially that obtained from the lower rectum, seemed to contain large numbers of eggs. The material was thus relatively well concentrated in comparison with routine stool examination and enema returns.

The cyclic appearance of eggs has frequently been noted. Multiple examinations have often been necessary. The reason for this is readily apparent upon consideration of the gross and microscopic pathology. Since rectal lesions predominate in *S. mansoni*, eggs are passed only as the hard and well formed stool scrapes the mucosal area where the eggs are embedded. For this reason, examination of the overlying mucus and outer layers of stool is far more satisfactory than is that of liquid stools, or the examination of the central portions.

Latty et al.,<sup>6</sup> in their studies of more than 100 cases of schistosomiasis, note that no single test detected all infections. When three stool specimens were examined, the MGL (formalin-ether) technic revealed almost as many cases as the AMS III method (acid-sodium sulfate-triton-ether), but individual specimens were more often positive and a greater number of eggs were recovered per specimen by the AMS III technic.

All fecal material in our laboratory was examined by the acid-ether method. The stool examination was often negative despite numerous intermittent attempts. In the infested individual, however, proctoscopic aspirations invariably resulted in a positive diagnosis.

Khalil and El Din<sup>7</sup> in 1930 demonstrated that eggs could be found in the mucus obtained by scraping the rectum with a finger cot. Ottolina and Atencio<sup>8</sup> in 1943 showed that unstained rectal mucus would reveal the eggs by direct microscopic examination.

DeGouveia and Beamer<sup>9</sup> have recently described the characteristics of unstained granulomatous lesions and pseudotubercles. Two cases were reported to be found positive by examination of the fresh rectal biopsy specimen which were not detectable in fixed tissue preparations. The material from the biopsy was compressed on a slide and examined directly.

Despite numerous attempts, we were not able to duplicate these results with any of our positive cases.

*Proctoscopy:* Many observers have pointed out that asymptomatic and mildly symptomatic infections may have a normal-appearing rectal mucosa on proctoscopic examination.

In cases with positive findings the bowel wall has appeared friable, with submucosal, punctate hemorrhages. Often the appearance is finely granular, or cobblestone. Multiple ulcerations and papillomata have been noted by some observers, but have been inconstantly found.

Bercovitz et al.,<sup>10</sup> in their report on the proctoscopic picture of asymptomatic *S. mansoni*, found that 60% of 155 Puerto Rican males had rectal changes. They found sharply demarcated, noninflammatory, ulcerated areas. Free blood

was seen to ooze from them. These ulcerations seemed to vary from day to day. They were nearly always at the bifurcation of capillaries or lying directly on them. Capillaries, and occasionally venules, were readily visualized. The degree of severity of infection and the duration of the disease have been estimated by these rectal findings. Far advanced disease, with bloody diarrhea and hepatosplenomegaly, was found by Koppisch<sup>11</sup> in only 4% of cases. The vast bulk of the disease consists of asymptomatic or mildly symptomatic cases such as those reported above.

**Rectal:** Rectal biopsy should be performed even when no abnormality is noted in the proctoscope, although the appearance of a granuloma alone is not indicative of active infection, and should be followed by repeated stool examination and biopsy.

Filizzola<sup>12</sup> noted that biopsy material should be obtained through the rectoscope for good visualization of the mucosa. He advocated taking material from the third Houston's valve in addition to other sites. When other sites were negative, the specimen from the third valve was positive in some 6% of cases. Also, 70% of the eggs at this site were alive, as compared to 50% in other sites. Thus the higher the biopsy site, the more frequently live eggs were found.

We attempted to biopsy this valve in all cases, and encountered no difficulty. In a few cases a local anesthetic, Tronothane,\* was inserted before the examination, but there appeared to be minimal discomfort in the majority of cases without anesthesia of any kind. Two patients, with the use of the topical anesthetic, still developed abdominal cramping pain and distention, which cleared in a few hours. The biopsy material in our two cases seemed positive from all sites, and the superiority of the third valve could not be verified.

In comparing stool examination against rectal biopsy, Lyons and Benson<sup>1</sup> note that, of 42 patients with eggs of *S. Mansoni*, both stool and rectal biopsy were positive in 33; stool was positive in a total of 39, with six negative rectal biopsies. Also, 36 had positive rectal biopsies, with three negative stool examinations. They advocated performance of rectal biopsy after three negative stool examinations by the AMS III technic.

Rectal biopsy of case 2 is shown in figure 5B, a high power view which demonstrates eosinophilic and mononuclear infiltrates surrounding an egg, with partially visible lateral spine embedded in a submucosal vein. The remnants of a second egg, also in the submucosa, with visualization of the outer membrane, can be seen immediately below. Often the venules of the mucosa and submucosa contain giant cells surrounding the shells of the eggs.

**Skin Test:** Ramsay<sup>13</sup> has pointed out that the skin test requires additional refinement before it will be a reliable clinical tool. The material used is obtained from cercarial antigen. False-negatives were noted in one-third of *Schistosoma haematobium* proved cases. It is questionable if a diagnosis should ever be made on a skin test alone.

**Liver Function and Biopsy:** Deschamps et al.,<sup>14</sup> have noted that hepatic granulomas frequently occur in the complete absence of gastrointestinal or hepatobiliary symptoms, without enlargement of the liver or spleen, and often (10 to 15%) without evidence of liver function abnormality.

Two types of hepatic lesions have been demonstrated: (1) nonspecific, and (2) diagnostic (if eggs were seen). Lichtman<sup>15</sup> has estimated that some 3%

\* Pramoxine hydrochloride, Abbott.



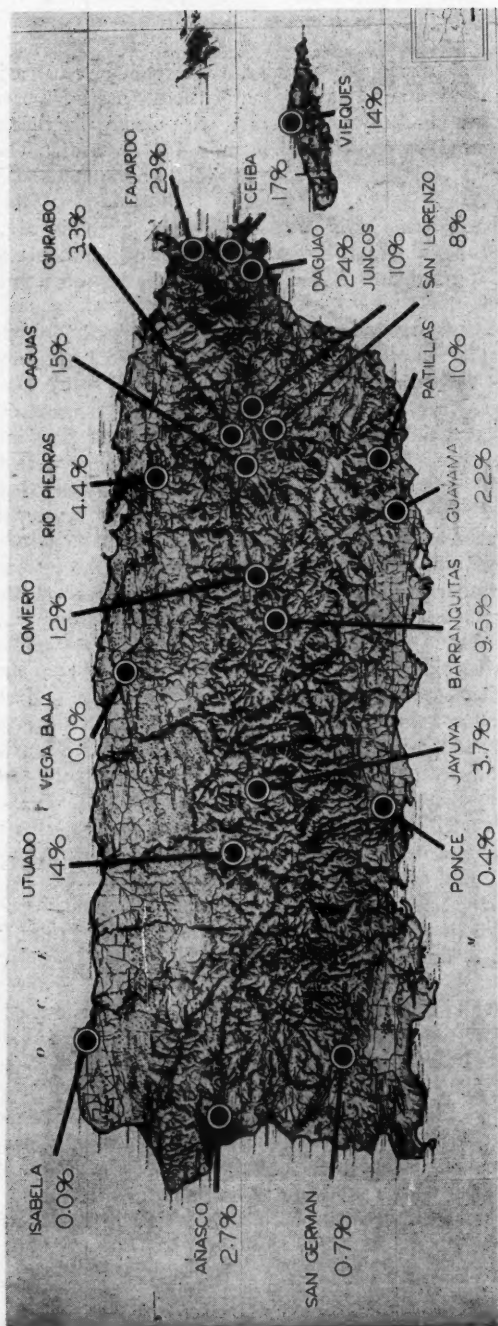


FIG. 4. Diagrammatic portrayal of the prevalence of *Schistosoma mansoni* infection on the island as estimated by D. J. J. Maldonado, of Santurce, Puerto Rico.

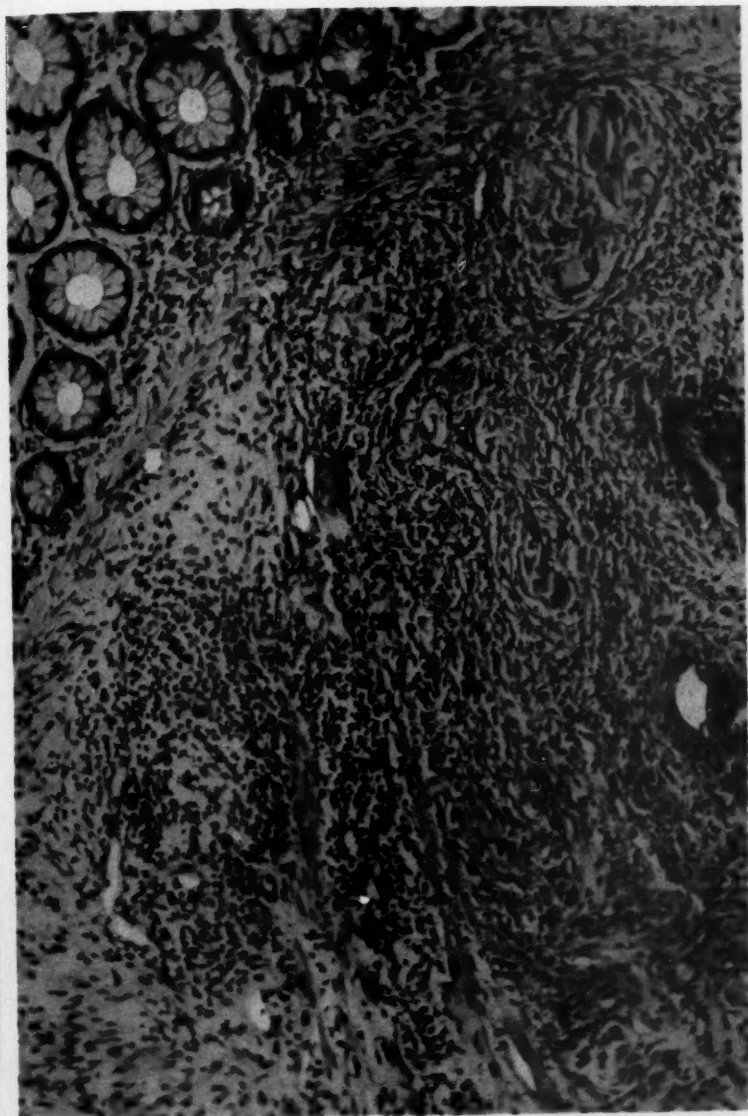


FIG. 5 (A). Low power of rectal biopsy material.

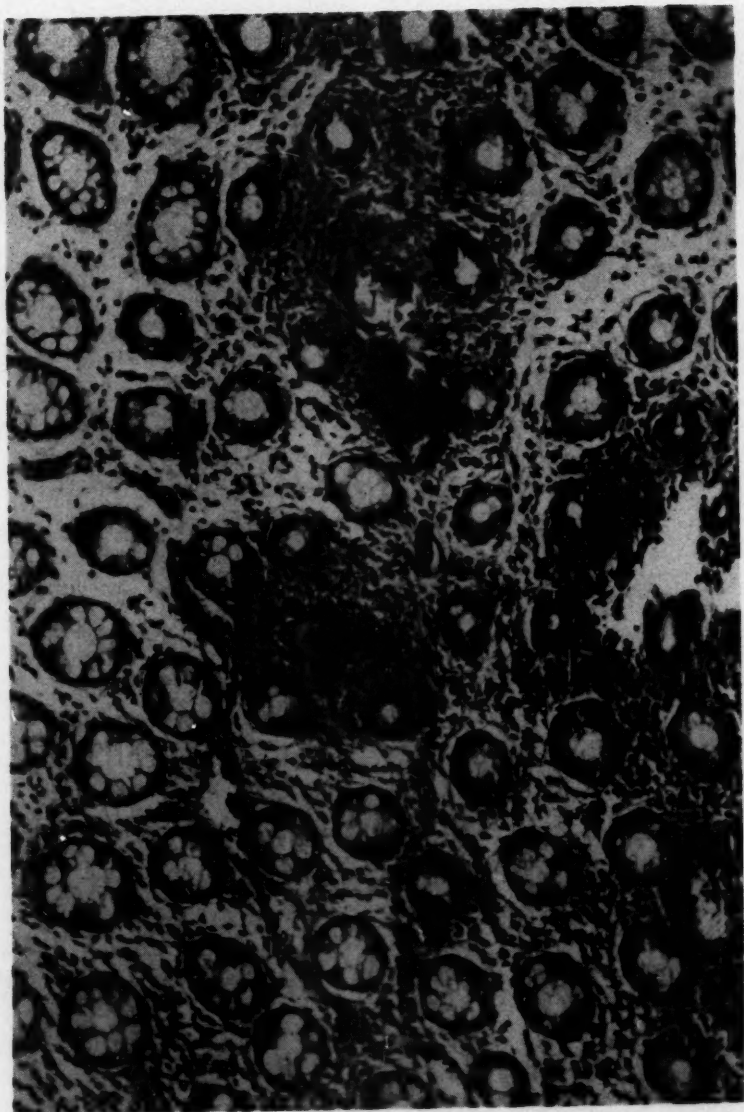


FIG. 5 (B). High power view of rectal biopsy material. Eosinophilic and mononuclear infiltrates surrounding an egg, with visible lateral spine embedded in a submucosal vein, are seen.

of cases eventually develop cirrhosis. The cirrhosis is characterized by severe fibrosis in the periportal areas, with calcification of vessels (white clay pipestem cirrhosis). Jaundice is rare in *S. mansoni* prior to the development of definitely established cirrhosis.

Hepatic biopsy is useful in detecting and assessing the extent of liver involvement, the activity of the disease, and the response to therapy. Experimental schistosomiasis has demonstrated the following sites of fluke preponderance: mesenteric venules, 60%; portal, 20 to 30%; liver, 0 to 10%. After therapy with antimonials, however, this ratio has changed as follows: mesenteric and portal venules, 0%; liver, 100%. This has been taken to indicate that the effect of therapy is to weaken and dislodge from the portal system the adult flukes which consequently follow the portal stream into the liver bed. Thus, liver biopsy has been found useful in demonstrating the effectiveness of therapy, the number of worms increasing in the liver after prolonged therapy, and later becoming encapsulated and degenerated. Furthermore, with inadequate therapy the still viable adults are capable of renewed pathologic activity in the liver and may produce liver function abnormality. Further, liver biopsy has been demonstrated to be of importance because of reported toxicity of stibophen (Fuadin) and antimony potassium tartrate to the liver. Elevations of the serum bilirubin and bromsulfalein dye test have been noted after such therapy. Serial biopsies thus elucidate the nature and prognostic significance of such changes.<sup>1</sup>

Although liver biopsy has been found useful in heavy infestation, tissue sections are often negative in the light infestation, which is the predominant form. Thus, failure to find abnormality would not prove the absence of involvement.

The dissociation of liver function and pathology is well known. The elevation of the bromsulfalein dye test in case 1 (15%), with normal flocculation tests, electrophoretogram and serum bilirubin, well demonstrates this point, especially since there was no evidence of clinical hepatosplenomegaly or dysfunction. Possibly the intercurrent hepatitis superimposed had a role to play, although the patient remained asymptomatic, without organ enlargement, anorexia, weight loss or abnormality in other liver functions following the episode. Unfortunately, liver biopsy could not be performed at this station.

Rodriguez<sup>16</sup> has emphasized the occurrence of bilharzial cirrhosis in younger patients, often with portal hypertension, hypersplenism, anemia due to varices, and associated edema and ascites. Acquiring the infection in childhood thus predisposes to earlier and more severe liver involvement than usual. Abnormal function tests have been manifest primarily in elevated bromsulfalein dye retention, serum bilirubin, elevated cephalin flocculation and increased gamma globulin. In Puerto Rico, 20 to 30% of cirrhosis may be due to *S. mansoni*. However, not more than 3 to 7% of the mildly symptomatic cases of schistosomiasis develop cirrhosis.

Dimmette,<sup>17</sup> in reviewing 189 clinically symptomatic cases, found 45% to have liver changes definitely diagnostic of *S. mansoni*. He advocated the wedge method of biopsy as being twice as effective as the needle biopsy technic. The parasite (adult fluke) was seen in 7.3% of specimens of parenchymal tissues.

#### PROGNOSIS

Generally speaking, the clinical manifestations are most severe in *S. japonicum*, less with *S. mansoni*, and least with *S. haematobium*. The disease in Puerto

Rico is usually somewhat milder than that seen in Africa. The degree of infection and the complications have been reported less frequently. The presence of rectal lesions, recognizable by proctoscopy in our two cases, indicates that the intestinal phase of the disease had been fairly well established. Cirrhosis is much less commonly seen in the Puerto Rican forms of the disease than it is in the African or oriental forms.

Experimentally in monkeys, complete recovery within four years after an initial exposure to 1,000 cercariae (a heavy infection) has been noted, with only the slightest traces of fibrosis of the intestinal wall and liver.<sup>18</sup>

The prognosis is rendered difficult to analyze owing to the scarcity of follow up studies on large groups of uncomplicated cases. The disease, among those who live in the endemic areas, is commonly complicated by other environmental disorders. Mild subclinical infestations seldom lead to devastating tissue alterations if not accompanied by a poor diet, hepatotoxins, or intercurrent infections. The heaviness of the infestation and the general condition of the host are the most important factors governing the severity of the disease. Pipestem cirrhosis is a pathologic curiosity which appears to be rare even in the heavily infected areas.<sup>19</sup>

Jung<sup>20</sup> notes that the occurrence of rectal lesions, including encircling cicatrization, indicates a guarded prognosis, since these lesions are progressive. The presence of splenomegaly also aids in evaluating the seriousness of the prognosis.

It is believed that adult flukes may survive as long as 25 to 26 years and produce viable eggs if no treatment is administered. In Puerto Ricans who have left the endemic area, however, most flukes die three to nine years after leaving the source of infection.

The pathologic process in the bowel and liver, which is most serious, is essentially one of fibrosis and subject to scarring. Therapy which destroys or inactivates the adult worms tends to clear up the *acute* inflammatory and granulomatous lesions. In the liver there is some degree of residual damage after any form of cirrhosis, but this is probably a little less marked in the periportal type of cirrhosis, which is typical of hepatic schistosomiasis. It is unlikely that, after five to 10 years of subjection to infection, any marked change would be produced as the result of treatment, in the ordinary fibrotic lesions. Therapy in the chronic infection serves primarily to prevent the development of further lesions, and would preserve the integrity of the affected organs at their present level.

There is, however, an important and discouraging feature. No treatment presently available is thoroughly satisfactory, especially in the older and chronic cases. Frequently a thorough course of treatment will not destroy even a majority of the adult flukes, but will usually inhibit the production of eggs by the female, so important as a source of inflammation and fibrosis. Thus, several courses of treatment are indicated at three- to six-month intervals, followed by careful stool examinations and rectal biopsies. Hence, one cannot speak of a cure until after several negative examinations over a period of two to three years.<sup>21</sup>

The damage resulting from the eggs present in the tissues before treatment may progress, of course. Spontaneous cures, on the other hand, may occur among those whose initial infection is heavy.<sup>19</sup> Schistosomiasis is in many cases a self-limiting disease.



## TREATMENT

Under carefully controlled hospital conditions, intravenous antimony potassium tartrate in the usual 0.5% dose was administered every other day beginning with 8 c.c. of solution given slowly over a 10-minute period, after freshly boiling the saline used for dilution. The dose was increased by 4 c.c. until a maximum of 28 c.c. was given in one dose. Epinephrine and dimercaprol (British antilewisite) were available as antidotes. Arthralgia and myalgia were noted by both patients. Slowness of the intravenous injection, with preliminary atropine, 1/150 grain, seemed to prevent the often noted initial bronchospasm.

The patients were kept flat for an hour after the injection, to prevent postural ischemia. No specific electrocardiographic or myocardial irritant changes occurred.

TABLE 3

Tartar Emetic Treatment							Differential Count					
Date	Dosage-0.5%	Toxicity	W.B.C.	BSP	Ceph. Floc.	Icterus Index	Neuts.	Lymphs.	Monos.	Basos.	Bands	Eos.
4-9-56	8 c.c.	None	—	—	—	—	—	—	—	—	—	—
4-16-56	12 c.c.	Laryngeal spasm	7,150	—	—	—	49	30	5	—	6	—
4-18-56	16 c.c.	Tonsillar pillar burning	5,900	—	Negative	—	32	47	5	1	4	11
4-20-56	16 c.c.	Sweating, dizziness and laryngeal burning	5,450	—	—	—	28	48	5	2	11	6
4-23-56	20 c.c.	None	6,550	—	—	—	42	35	3	1	7	12
4-25-56	24 c.c.*	None	5,900	—	Negative	—	32	38	7	—	3	20
4-27-56	28 c.c.*	None	6,300	—	—	—	30	48	4	—	0	18
4-30-56	28 c.c.*	Slight tightness of throat at 20 c.c.	5,400	—	—	—	37	46	3	—	—	14
5-2-56	28 c.c.*	Slight burning of throat	6,650	—	—	—	42	32	6	1	4	15
5-4-56	28 c.c.*	None	5,750	30%	Negative	10	24	44	2	—	—	30
5-9-56	28 c.c.*	None	14,600	—	—	—	17	14	4	2	—	60

\* Dose given in 150 c.c. N-saline.

Lyons and Benson<sup>1</sup> commented upon the eosinophilic and leukocytic response to therapy after reaching maximal tolerated doses of antimony potassium tartrate. In 20% of their cases this response was noted, with some eosinophil counts of 50 to 70% and with a leukocytosis of 15,000 to 35,000. Eosinophilia has been postulated as indicating liberation of foreign protein or destroyed parasite into host tissues, thus presaging more effective clinical results. The 80% that appeared refractory to therapy may have been unable to produce an eosinophil response.

## OUR RESULTS

Larger doses of the drug (16 to 28 c.c.) were best administered by saline drip (250 c.c.) over a one-hour period. Toxicity of the drug was manifested by abdominal cramps, diarrhea, anorexia and pyrosis. A metallic taste and salivation occurred almost immediately. Case 2 had an intercurrent tonsillectomy and noted local burning in the area. After the full course of treatment,

increased energy, appetite, weight gain and loss of the epigastric distress related to food intake occurred.

Elevated bromsulfalein dye retention, bilirubin, cephalin flocculation and thymol turbidities have been noted after therapy. It is unknown whether these result from primary liver damage by the drug, or are the result of incomplete therapy, with increased parasitism of paralyzed but still living adult flukes from the portal and mesenteric vessels. Case 2 developed a bromsulfalein retention of 30% and an eosinophilia of 76% as a result of therapy. A progressive leukopenia and lymphocytosis occurred (table 3).

Laboratory evidence of cure depends upon negative stool examination six months after therapy, normal rectal biopsy and proctoscopic picture, liver function and possible biopsy, and further reevaluation for probably one or two years. The initial paralysis of female oviposition with therapy must be followed adequately before a cure can be pronounced.

#### FINAL SUMMARY

1. Asymptomatic schistosomiasis, or mildly symptomatic infestation, is by far the more common form in Puerto Ricans in a nonendemic area. A 10 to 20% over-all incidence is suggested.
2. A high index of suspicion, with routine stool examination, proctoscopy and rectal biopsy, is indicated in all hospitalized Puerto Ricans.
3. Proctoscopic aspiration of mucus is an effective method of obtaining a high concentration of well preserved eggs.
4. The proctoscopic picture may resemble acute ulcerative colitis. Positive biopsy material may be obtained from any rectal area.
5. Treatment with tartar emetic produced marked toxicity, bromsulfalein elevation and eosinophilia. A leukopenia was also pronounced.
6. Clinical cure requires one to two years of careful follow-up, with negative stool examination, rectal biopsy, proctoscopic appearance, and normal liver function and biopsy.

#### ACKNOWLEDGMENT

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#### SUMMARIO IN INTERLINGUA

In le curso del examine rutinari de omne le prisioneros portorican in un grande penitentiario del governmento statounitese federal, il esseva constatate que duo inter 16 subjectos albergava ancora le parasito *Schistosoma mansoni*. Ovos de illo esseva identificate le plus preste e facilmente in aspiratos proctoscopic, sed specimenes biotic ab le varie plicas transversal del recto e le muco coperiente le feces etiam contineva los.

Un fragile mucosa granular—nullemente differente ab illo de non-specific colitis ulcerative—esseva trovate in ambe le casos active.

Hepatosplenomegalia, dysfunction hepatic, e hyperglobulinemia non esseva incontrate. Le configurationes electrophoretic esseva normal.

Le symptomatologia consisteva solamente de vage gravamines gastro-intestinal. Isto corrobora le assertion de Lyons e Benson que omne portoricanos, i.e. omne individuos nascite in Porto Rico, deberea esser subicite rutinariamente a examines rectal, incluse studios del fece e biopsias rectal. Il existe nulle base pro predicar qual individuos va provar se inficite.

Es presentate datos statistic que indica le magnitudine del problema de schistosomiasis in Porto Rico.

Therapia con tartaro stibiate resultava in marcate grados de toxicitate, augmento del retention de bromsulphaleina, eosinophilia, e leucopenia, sed illo esseva efficace in ambe casos.

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## EDITORIAL

### MODERN CONCEPTS OF PLAGUE CONTROL

The causative agent of the human disease, plague, was first accurately described by Yersin in Hong Kong in the year 1894. Since that time much has been written about the bacillus of Yersin and great strides have been made in the control of this disease. It is a tribute to man's perseverance that thousands of physicians, public health workers, entomologists and other biological scientists have given freely of their time and even their lives in an attempt to control this scourge of mankind. Spread of the modern pandemic from foci in Asia eastward to the endemic regions of today in India, Madagascar, the Middle East and Africa is no less an interesting tale. The spontaneous decline of human infections with *Pasteurella pestis* which followed throughout the world remains one of nature's mysteries. It is indeed ironical that much of our knowledge concerning the control of plague came after this natural decline had begun and, in many regions where this disease once occurred, there is probably no connection between control measures and the disappearance of human and rodent plague. Any attempt to evaluate the effectiveness of one or several control measures must always be made in the light of this phenomenon. In spite of the marked decline in plague morbidity, permanent endemic foci remain in many areas of the world constantly being fed from wild or commensal rodent sources. Within the last 20 years, several thousands of cases of human plague have occurred in China, and Java. In addition, there are well established foci in India, Madagascar, South Africa, South America and indeed the United States from which a few to several hundred cases of human plague are reported annually. A realistic approach to this problem demands that we recognize the potential danger of these foci and be prepared to cope with epidemic situations should this delicate balance be disturbed by wars or natural disasters. This is particularly important now that several effective methods of plague control are available.

Rodents of various types are the primary hosts of *P. pestis* and it is probable that endemic foci exist only as long as a moderately susceptible rodent population will support the passage of this organism from one to the other by way of an ectoparasite vector. There is general agreement that wild rodents form the basis of permanent enzootic foci, hence the terms "sylvatic or wild-rodent plague." Epidemic plague associated with urban areas is almost always initiated by an epizootic among the commensal rats *Rattus rattus* or *Rattus norvegicus* and transmitted to man by fleas, the commonest of which is *Xenopsylla cheopis*. Ordinarily, man so infected develops bubonic plague which, as the name implies, is characterized by the appearance of a regional bubo attesting to the spread of *P. pestis* through

lymphatics. When bacteremia is followed by secondary pneumonia, the disease is then spread directly from man to man via the respiratory route. It is obvious that measures effective in the control of flea-borne plague are frequently worthless in limiting the spread of the pneumonic variety. The application of control methods to be described must necessarily take into account the immediate problem insofar as the type of human disease is concerned.

Methods employed to disrupt the natural cycle through which *P. pestis* travels as it spreads among rodents and thence to man are divided into three major groups: (1) anti-rodent measures, (2) vector control programs and (3) prophylaxis of human disease.

#### ANTI-RODENT METHODS

There are various methods for killing rodents and the success of any of these depends to a large extent on the nature of the rodent population and the extent of the infestation. Generally speaking, anti-rodent campaigns require a large investment in manpower and time and are effective only under those circumstances where the community has not been disrupted by disaster and rehabilitation designed to discourage further breeding of rats can be employed in conjunction with the rodent-killing program. Anti-rodent methods are valuable only for the eradication of commensal or domestic rats (*R. norvegicus* and *R. rattus*) there being general agreement that previous experiences with control of wild rodents have resulted in dismal failure. It should also be emphasized that epidemic plague is usually a reflection of high flea indices in a rodent population diminishing as a result of epizootic plague. Therefore, any further reduction as might result from rodent poisoning will serve only to force infected flea vectors to feed on other hosts such as man. Under such circumstances, vector control must be the goal of first priority.

Of the various methods of rat control used, there is good evidence that killing by mechanical means including trapping and the use of predators such as cats, dogs and ferrets and fumigants such as calcium cyanide are either of no value at all or applicable only in special situations. The most effective anti-rodent substances are poisons which the animal ingests. Five poisons used commonly in rodent baits vary in their relative efficacy and safety and should be used only after due consideration has been given to these factors in the light of the existing problem.

*Sodium Fluoroacetate*. This compound, often called "1080," was singled out as a most effective rodenticide in the course of a screening program carried out in this country in 1943 and 1944.<sup>1</sup> It is a white crystalline substance, highly soluble in water and without any odor. Unfortunately, it is also quite toxic for domestic animals and man; the amount contained in 15 c.c. of "1080" solution used to poison rats will prove fatal to a small

<sup>1</sup> Kalmbach, E. R.: "Ten-Eighty," a war-produced rodenticide, *Science* 102: 232, 1945.



child. Rats poisoned with sodium fluoroacetate usually die within 1-8 hours and since they are rapidly overcome by its effect, death in the open is common. Unless special precautions are taken, secondary deaths in dogs and cats will follow the devouring of poisoned carcasses. There is some disagreement about the development of bait shyness, however, no degree of drug tolerance has been noted among rats surviving the first dose. Death in the case of rats is due to respiratory depression.

*Arsenic.* Arsenic is commonly used as a rodenticide in the form of arsenic trioxide ( $\text{As}_2\text{O}_3$ ) which is a white crystalline powder rather insoluble in water. It is, therefore, usually added to solid baits. Concentrations varying from 3 to 15% have been employed in rodent bait. Although the material is inexpensive, it is highly toxic for domestic animals and man. Its widespread use in South America, however, has been associated with few accidents.<sup>2</sup> When fish baits are used and tartar emetic is incorporated in the bait, accidental consumption by man and his domestic animals is reduced to a minimum.

*Red Squill.* *Urginea maritima*, a plant native to the Mediterranean countries, contains a rodent-toxic glycoside, scilliroside, which has been used for centuries in various crude forms as a rodenticide. Red squill is unique among rodent poisons in that it is usually refused by domestic animals and possesses emetic properties. Therefore, it frequently proves fatal to those animals unable to vomit, such as rodents. Unfortunately, standards in potency are difficult to maintain and many preparations are not effective as rat poisons. Although red squill is among the safest of rodenticides, it is extremely irritating to the skin and great care must be exercised in its handling.

*Alphanaphthylthiourea.* This rodenticide, commonly known as "ANTU," was described by Richter in 1945.<sup>3</sup> It is a gray powder without odor or taste and insoluble in water. It is non-irritating to the skin and relatively safe for use in areas frequented by domestic animals and children. Rats which have consumed sufficient quantities of the poison succumb within 16-30 hours with acute pulmonary edema. Because of the rapidity and nature of their death, poisoned rodents frequently die in the open. There is evidence that rats develop bait shyness rendering long-term programs ineffective.

There is a group of rodenticides which are excessively dangerous and for this reason should not be employed in view of the efficacy of others mentioned above. These include barium carbonate, strychnine, phosphorus and thallium sulfate.

*Anticoagulants.* There is a fundamental difference between the mode

<sup>2</sup>Long, J. D.: Choice of rat poison in antiplague work; rat poisons used by National Antiplague Services of Ecuador, Peru, Chile, and Argentine Republic, Pub. Health Rep. 51: 551, 1936.

<sup>3</sup>Richter, C. P.: The development and use of alpha-naphthyl thiourea (antu) as a rat poison, J. A. M. A. 129: 927, 1945.

of action of the rodenticides described above and anti-coagulants used for rodent control. Most of the former depend upon the administration of a single, lethal dose; anti-coagulants are chronic poisons and must be taken in bait on successive or alternate days for 5-10 days. The most popular preparation, 3-( $\alpha$ -acetylbenzyl)-4-hydroxycoumarin, also known as warfarin, does not produce acquired bait refusal and has not been associated with any accidents in man. It is effective in small concentrations (0.005%)\* and is accepted by rats in a variety of baits.

Several factors will influence the choice of rodenticide to be used in any given poisoning campaign including the nature of the infested sites, the species of commensal rat, the attitude and habits of the people and their domestic animals and the availability of equipment and funds. It is obvious that during the emergency of a plague epidemic preference should be given to a rapidly-acting poison, anti-coagulants being reserved for plague free areas or interepidemic periods.

The importance of public-health propaganda cannot be overemphasized. Cooperation of the people is essential for the success of any anti-rodent program particularly as regards the control of children and domestic animals and the protection of alternate sources of food from the rodent population.

#### VECTOR CONTROL

Elimination of the ectoparasite vector of plague is potentially the most effective single method of controlling the spread of this disease. However, the use of insecticides is attended by considerable expense and certain technical problems render most anti-flea campaigns less than completely successful. In practice, therefore, most plague control programs combine the use of insecticides with other anti-plague measures.

The most widely used and most effective insecticide is dichlorodiphenyl-trichloroethane, or DDT as it is commonly called. Although DDT is slow acting, the properties of killing on contact and marked residual effect make this insecticide ideal for control of plague and flea-borne typhus. There is general agreement that DDT is very effective against *X. cheopis* and other common rat-flea species. Recent evidence suggesting that certain fleas may acquire resistance to DDT has not constituted a serious deficiency in DDT efficacy as far as plague is concerned. Where this resistance has been reported, it is not sufficiently serious to affect programs where higher concentrations (10%) of DDT are employed.

DDT may be used as a dust or in the fluid form for the control of plague. In some areas where combinations are used, the superiority of combined spraying and dusting seems to have been established. DDT for dusting is obtained from the manufacturer in a 10% strength and most authorities recommend its use in this concentration. There is good evidence

\* Communicable Disease Center: Insecticides and rodenticides, Pub. Health Rep. 67: 455, 1952.

that 5% DDT recommended by some is not as effective as 10% dust.<sup>5,6</sup> In view of these observations and the risk of DDT-resistance, the false economy of using 5% DDT should be discouraged. The dust form of DDT is particularly useful around burrows since insecticide is transferred to the fur of rodents and is carried to nests. For this purpose, "patch dusting" around burrows and runs is preferable to spreading a thin layer of insecticide on large areas many of which will not be frequented by rodents. DDT dust is usually applied at the rate of 2-3 grams per square meter or 7-10 ounces per 1,000 square feet. It has been emphasized that the intensity of dusting should not be a function of area but of degree of rat infestation.<sup>7</sup>

DDT solutions are prepared by dissolving technical grade DDT in kerosene at the rate of 5 grams to 100 ml. of solvent. Emulsions of DDT may be made by dissolving DDT in kerosene and adding soap in order to render the concentrate soluble in water. Fluid preparations which are water soluble and dry wettable DDT powder containing an emulsifier, now available commercially, may be diluted to 5% concentration in water. Fluid preparations in concentrations of 5% DDT are distributed in a coarse spray. They are usually applied at the rate of one gallon per 1,000 square feet under which circumstances residual effect will persist for many months.

Care should be taken to see that DDT does not come into contact with food and, because of its similarity to flour, should be conspicuously labelled. Workers should wear dust respirators and wash their hands well before eating as DDT dust is absorbed by oily skin.

Results of plague control programs using DDT are quite impressive although credit must also be given to other measures employed simultaneously in most areas. Whatever the precise role of DDT in these combined programs, success as measured by reduction in flea populations is quite obvious and there is little doubt that insecticides have played a part in reducing the incidence of human plague. Reports by Macchiavello in Peru,<sup>8</sup> Mercier in Madagascar,<sup>9</sup> and Wagle and Seal<sup>10</sup> in India all attest to the efficacy of DDT in the control of plague. It should be emphasized that continuous surveillance is necessary to assess accurately the effect of insecticides on rat-flea populations. For this purpose periodic rat-flea surveys are mandatory.

Other insecticides of note include benzene hexachloride (BHC), chlordane, dieldrin and aldrine. With the exception of BHC, further work is

<sup>5</sup> Good, N. E.: Effectiveness of DDT dusting in controlling rat ectoparasites and typhus infection in rats, Communicable Disease Center Bull. 9: 5, 1950.

<sup>6</sup> Communicable Disease Center Bulletin 10: 4, p. 5, 1951.

<sup>7</sup> Davis, D. E.: The control of rat fleas (*Xenopsylla cheopis*) by DDT, Pub. Health Rep. 60: 485, 1945.

<sup>8</sup> Macchiavello, A.: Plague control with DDT and "1080": results achieved in plague epidemic at Tumbes, Peru, 1945, Am. J. Pub. Health 36: 842, 1946.

<sup>9</sup> Mercier, S.: La prophylaxie de la peste au moyen des insecticides organiques de synthèse a Tananarive: Premiers resultats, Bull. Soc. path. exot. 45: 409, 1952.

<sup>10</sup> Wagle, P. M., and Seal, S. C.: Application of DDT, BHC, and cyanogas in the control of plague in India, Bull. World Health Org. 9: 597, 1953.

needed to determine the relative value of these compounds. The gamma isomer of benzene hexachloride is a very potent insecticide which kills faster than DDT but, because of its volatile nature, does not possess the residual action of the latter. Sharif<sup>21</sup> was able to show that, under similar experimental condition, DDT-effect (1:200,000) lasted for 238 days whereas BHC (1:5,000) retained residual action for only 48 days. Field trials in India<sup>10</sup> seemed to have confirmed the superiority of DDT in plague control. Because of the rapid killing action of BHC, Mercier<sup>9</sup> has used it in combination with DDT.

#### IMMUNOPROPHYLAXIS OF PLAGUE

Human beings and rodents surviving an attack of plague exhibit resistance to reinfection with *P. pestis*, there being few recorded instances of second infections. However, since there are not many instances of spontaneous recovery, data on duration and solidarity of immunity are not plentiful. The practice of selecting patients recovered from plague for subsequent work on plague wards is well known. Recent studies on antibody response in naturally infected human beings, however, suggest that immunity is relative and of limited duration. Similar observations have been made in the case of artificially-induced immunity. Modern anti-plague vaccination began one year after the discovery of *P. pestis* when Yersin, Calmette and Borrel<sup>12</sup> demonstrated that rabbits could be immunized by repeated injections of heat-killed cultures. In 1896, Haffkine obtained similar results with heat-killed broth cultures of *P. pestis*.<sup>13</sup> Since that time, a vast literature on the preparation and use of plague vaccines has appeared. During the last 50 years, two types of vaccines have been used in mass vaccination campaigns. Recently, experimental studies with chemical fraction of *P. pestis* as immunizing agents have received a great deal of attention.

**Killed Plague Vaccines.** Early workers resorted to the use of heat for sterilization of plague cultures which had been grown at room temperature. Cultures grown at lower temperatures for several weeks were said to yield the most potent vaccines. Recent studies have established that agar-grown cultures incubated at 37° C. for two to three days yield heavily encapsulated organisms thought to be superior as immunizing antigens. Vaccine currently produced at the Haffkine Institute in Bombay is grown on casein hydrolysate agar and killed with formalin.<sup>14</sup> Similarly, vaccine used by the United States Armed Forces is agar-grown and formalin-killed. Most killed vaccines in current use are standardized to contain 1,000 million to

<sup>11</sup> Sharif, M., and Sokhey, S. S.: Report of the Haffkine Institute, 1944-1946, pp. 62, 64.

<sup>12</sup> Yersin, A., Calmette, A., and Borrel: La peste bubonique, Ann. Inst. Pasteur 9: 589, 1895.

<sup>13</sup> Haffkine, W. M.: Remarks on the plague prophylactic fluid, Brit. M. J. 1: 1461, 1897.

<sup>14</sup> Sokhey, S. S., and Habbu, M. K.: Report of the Haffkine Institute, 1944-1946, p. 56.

3,000 million organisms per ml. and are administered subcutaneously in two doses of 1 ml. each at 5-7 day intervals.

*Living Avirulent Vaccines.* The first use of living, attenuated cultures of *P. pestis* as immunizing agents was described by Girard and Robic in Madagascar<sup>15</sup> and Otten in Java.<sup>16</sup> Since that time thousands of human beings have been inoculated with the EV and Tjiwidej strains, respectively. Immunogenicity of these strains depends on their ability to multiply to a limited degree resulting in local and constitutional reaction in a certain percentage of subjects receiving them. Currently used vaccines contain 1,000 million organisms per ml. and are administered in single doses of 0.5 to 1.0 ml. subcutaneously. In addition to the disadvantage of untoward reactions, living vaccines in the fluid state are not stable and must be administered soon after their preparation. Recent experiments with lyophilization of these strains, however, suggest that dry vaccine may retain full potency after prolonged storage.

*Chemical Extracts of P. pestis.* Fractionation of the plague bacillus has revealed the principal immunogenic component to be the protein capsular substance. Meyer et al.<sup>17</sup> have described the favorable results of animal experiments with this material which has been designated Fraction I. Inoculation of human beings with Fraction I results in the production of agglutinins and mouse-protective antibody. Absorption of hyperimmune serum with Fraction I results in the removal of all mouse protective activity in the serum.

Realistic appraisal of the available methods of inducing active immunity to plague in human beings results in the conclusion that effective immunity may follow the use of all types of vaccines. Speaking of human plague vaccination, Meyer<sup>18</sup> has stated that:

"Any plague vaccine, whether killed or living, provided it either inherently contains 2 to 3 mg. of Fraction I or is capable of producing this amount when inoculated into the body of man, will favorably alter the susceptibility of 50 per cent of the inoculated." There is general agreement that such immunity is not durable and that reinoculation is an essential part of any vaccination program.

Specific measures of plague control as they apply to programs against rodents and their ectoparasites as well as artificial immunization of man have been discussed. It is now appropriate to describe the implementation of these methods under epidemic conditions, primary emphasis being placed

<sup>15</sup> Girard, G., and Robic, J.: Vaccination contre la peste au moyen d'une souche de bacilles de Yersin, vivants, de virulence atténuee, Bull. Acad. de méd., Paris 111: 939, 1934.

<sup>16</sup> Otten, L.: Conference on the Netherlands' Association for Tropical Medicine, Amsterdam, March 25, 1934.

<sup>17</sup> Meyer, K. F., Foster, L. E., Baker, E. E., Sommer, H., and Larson, A.: Experimental appraisal of antiplague vaccination with dead virulent and living avirulent plague bacilli, Proceedings of the Fourth International Congresses on Tropical Medicine and Malaria, Washington, D. C., May 10-18, 1948.

<sup>18</sup> Meyer, K. F.: Recent studies on the immunity response to administration of different plague vaccines, Bull. World Health Org. 9: 619, 1953.



on the prevention of spread of clinically overt disease. In view of the obvious differences between bubonic and pneumonic plague, separate consideration must be given to the control of each.

Patients with bubonic plague who have not developed secondary pneumonia need not be isolated since they are not directly contagious. Although there is much in favor of hospitalization from the patient's point of view, antibiotic therapy in the home does not present a difficult problem where medical personnel are available. For the same reason, contacts of these patients need not be segregated if competent surveillance is possible. Houses and villages where plague is occurring should be thoroughly treated with DDT and clothing worn by plague victims should be disinfected. Antirodent measures are best held in abeyance until the flea-vector has been dealt with. Evacuation and wholesale destruction of houses is no longer necessary except where temporary removal of occupants of individual dwellings facilitates the application of DDT. Mass vaccination will be particularly effective if a basic immunity has been established by previous use of vaccine. Chemoprophylaxis is expensive and impractical on a large scale and is attended by the risk of untoward reaction to the antibiotic. Clinically overt cases of bubonic plague can be treated successfully with streptomycin, chloramphenicol and the tetracyclines and reliance should be placed on the prompt recognition and treatment of these patients.

Pneumonic plague control is based solely on the isolation of the affected patient and his contacts. Success of this approach will be entirely dependent on an effective system of case detection. Removal of the victim of pneumonic plague during the first few hours of his disease will suffice to protect contacts since most patients are not infectious during the early phase of the illness. The life of the patient is also dependent upon prompt therapy with streptomycin or a broad-spectrum antibiotic, since those who are denied specific therapy for as much as 24 hours after the onset of symptoms are doomed to death.<sup>19, 20</sup> In contrast to bubonic plague, patients suffering from plague pneumonia as well as their contacts should be segregated where hour to hour observation is possible. Under these circumstances, the risk of further spread of the disease is reduced and the best possible chance of survival is afforded the ill patient and any contacts who might develop the disease.

The high infection rate among attendants caring for patients with pneumonic plague emphasizes the need for strict respiratory isolation technic. Masks of adequate thickness should be worn at all times and all objects contaminated with sputum must be sterilized.

The value of active immunization methods in warding off pneumonic

<sup>19</sup> Mercier, M.: A propos de la guérison de plusieurs cas de peste pulmonaire traités par la streptomycine au lazaret de Tananarive, *Bull. Soc. path. exot.* 44: 806, 1951.

<sup>20</sup> McCrumb, F. R., Jr., Mercier, S., Robic, J., Bouillat, M., Smadel, J. E., Woodward, T. E., and Goodner, K.: Chloramphenicol and Terramycin in the treatment of pneumonic plague, *Am. J. Med.* 14: 284, 1953.

plague is questionable and vaccination certainly should not constitute a major part of any program designed to limit a well-defined outbreak of this form of the disease. However, as reiterated by many workers in the field, by the prevention of bubonic plague, vaccination, ipso facto, will result in a reduction of the incidence of plague pneumonia.

Plague can no longer be considered a medical curiosity by physicians trained in the North American continent. Rapid air travel, the use of ever increasing numbers of American technicians in plague endemic areas abroad and the deployment of military personnel in regions of potentially high risk make it mandatory for physicians charged with the care of these people to understand the fundamentals of plague control.

FRED R. MCCRUMB, JR., M.D.

## REVIEWS

*Principles of Internal Medicine.* 3d Ed. Edited by T. R. HARRISON, RAYMOND D. ADAMS, IVAN L. BENNETT, JR., WILLIAM H. RESNIK, GEORGE W. THORN and M. M. WINTROBE. 1859 pages; 26 × 19 cm. The Blakiston Division, McGraw-Hill Book Company, Inc., New York. 1958. Price, \$18.50.

Few medical texts have caused as much stir as the appearance, in 1951, of Harrison's first edition. It was completely different, in many ways, from all predecessors. It attempted a unified approach to sick people by presenting the *Principles of Internal Medicine*. It began with an "Approach to the Patient," continued with a consideration of biologic fundamentals, followed with descriptions of disease grouped according to etiology, and concluded with a description of disease grouped under organ systems.

The present edition continues with the same general arrangement, but it has been completely reset, considerably re-organized, extensively revised, and many chapters have been completely re-written.

Two outstanding results of this re-doing are the sections on Disorders of Nervous Function and Diseases of the Nervous System. These have been singled out because, to many, this is an unfamiliar area of medicine. To slightly paraphrase the preface: "Psychiatry and Neurology have been approached from the broad medical viewpoint with an attempt to integrate neurologic with psychiatric concepts" for the internist.

The book has many other outstanding sections, but its greatest value is its *approach*—first to the patient; then, to an interpretation of the meaning of his symptoms, signs, and other findings; finally, to the disease process responsible.

Many wish that medical texts only appeared as third editions—the first needing a second to eliminate the errors; the third being what the authors really meant to say in the first place; the fourth, fifth, etc. becoming more and more stale. This is a typically excellent third edition of a book whose first edition was, to us, stimulating, informative and, most of all, enlightening.

B. W. A.

*Physical Diagnosis.* 14th Ed. By F. DENNETTE ADAMS, M.D. 926 pages; 26 × 17.5 cm. The Williams & Wilkins Co., Baltimore. 1958. Price, \$12.00.

The fourteenth edition of this popular work continues the traditions established by Dr. Cabot in the first eleven editions. Most of the book is devoted to descriptions of diseases affecting organ systems or anatomical subdivisions of the body. At the beginning of each major section, specific methods are discussed for examining the system under consideration. In the analysis of physical signs and symptoms, reference is frequently made to the altered physiology responsible for producing the abnormality. Appropriate laboratory investigations are suggested to aid in the study of many complex problems which confront the student and physician. Charts, graphs, electrocardiograms, roentgenograms, and photographs amplify descriptive material in the text. These adjuncts, selected with care, enhance the discussions. The book is well indexed.

Such a text is valuable to the teacher planning a course in physical diagnosis, students starting the study of medicine, and practitioners who wish to improve diagnostic technics and acumen.

J. E. C.

*Forensic Medicine: A Text-book for Students and a Guide for the Practitioner.* 6th Ed. By DOUGLAS J. A. KERR, M.D., D.P.H., F.R.C.P. (Edin.), F.R.S. (Edin.). 363 pages; 22.5 × 14 cm. The Macmillan Co., New York. 1957. Price, \$6.50.

This English standard textbook on Forensic Medicine now appears in its sixth edition. The present represents considerable broadening of subject matter over previous editions and is thoroughly up-to-date. It contains 32 chapters and four appendices. They cover the usual medicolegal topics of identification, wounding by various mechanisms, postmortem changes, the effects of heat, cold, lightning and fire on the body. Chapters are also devoted to sexual offenses, pregnancy and infanticide. There is excellent discussion of the legal aspects of insanity and of criminal responsibility. Ten chapters are devoted to toxicology, and here the coverage is largely clinical, including symptomatology and characteristic findings as well as treatment of poisoning, but with no attempt to give complete procedures for toxicologic examination. The book is well illustrated with a number of color pictures, particularly in the toxicology section. It is easily readable. The sections on examination of blood, and hairs are the best in the recent textbooks. It is, as its sub-title indicates, a text-book for students and a guide for practitioners, and this reviewer recommends it highly to all in these categories.

R. S. F.

*Progress in Cardiovascular Diseases.* Vol. 1, No. 1: *Progress in Cardiac Surgery.* Edited by CHARLES K. FRIEDBERG, M.D. 123 pages; 25.5 × 17.5 cm. (paper-bound). Grune & Stratton, Inc., New York. 1958. Price: Subscription to Volume 1 (four successive issues) \$8.00 in the U. S. A., \$10.00 elsewhere; single-issue price, \$3.00.

This is the first number of a new series entitled *Progress in Cardiovascular Diseases*, edited by Charles K. Friedberg, M.D., the author of the excellent text on cardiology, *Diseases of the Heart*. As such, it is actually a journal which is to be published at approximately quarterly intervals with each one being a symposium on one special aspect of cardiology. The present edition is devoted to *Progress in Cardiac Surgery*, and is designed to appeal to the general physician as well as to the cardiovascular specialist. Among the contributors are Paul Wood, Charles A. Hufnagel, Henry Swan, John H. Gibbon, Jr., John W. Kirkline, Denton A. Cooley, Willis J. Potts, and Andrew G. Morrow. The subjects are so selected that they include many of the more current advances in cardiac surgery.

This symposium is of considerable value. It fulfills a real need in a rapidly advancing field since it makes available material which would otherwise be difficult to collect and evaluate. It is recommended to the advanced student, general physician, and cardiologist. It is hoped that the succeeding issues will prove as valuable.

L. S.

*Regional Ileitis.* 2nd Revised Edition. By BURRILL B. CROHN, M.D., and HARRY YARNIS, M.D. 239 pages; 22 × 14 cm. Grune & Stratton, New York. 1958. Price, \$7.25.

This second edition follows its predecessor by nine years and the original paper on Regional Ileitis by Crohn, Ginzburg, and Oppenheimer by 26 years. The material presented is based on the authors' personal experience with over 676 patients with enteritis, many of them followed successfully over a number of years. The authors review the many theoretical aspects of regional ileitis, comment upon them and express their personal opinions about the, as yet obscure, features of the disease.

Clinical considerations are handled in very much the same way. Attitudes which differ from the authors' are presented clearly, contrasted with the authors' experiences, and discussed intelligently. The satisfactory technics of medical management are presented very clearly.

The authors' experience and attitudes concerning the surgical management of regional ileitis are especially valuable. Because of the highly controversial aspects of surgical treatment, this section of the book, tempered by the authors' long and broad experience with surgically treated patients, may very well constitute the most important portion of this monograph.

*Regional Ileitis* is an unusually concise and clear presentation of the facts and opinions and attitudes gained by personal experience over a span of nearly three decades.

W. C. E.

*Spezielle Therapie der Blutkrankheiten.* By Professor Dr. HANS GOLDECK, Oberarzt der II. Med. Universitäts-Klinik und Poliklinik in Hamburg. 235 pages; 24.5 × 16.5 cm. Ferdinand Enke Verlag, Hasenbergsteige 3, Stuttgart-W. 1955. Price, Cloth, DM 35.00.

While the purpose of this book is restricted to the special therapy of diseases of the blood, diagnosis and pathogenesis have also been amply considered. The author has had long experience in a special hematological division of the Clinic of Professor A. Jores, who has written the introduction. Section A deals with the anemias, Section B describes the therapy of blood hyperplasias and hemioblastoses, Section C discusses the therapeutic possibilities in hemorrhagic diatheses, and Section D presents suggestions for the therapy of partial and total insufficiency of the bone marrow. Each of the first three sections brings a detailed and critical appraisal of the available therapeutic measures before the specific therapy of each disease is discussed.

The indications for oral or parenteral iron therapy as well as guardposts against over therapy are very well presented. The various antianemic vitamins and the role of trace elements are described and explained. The place of external radiation therapy is amply mentioned and diagnostic and therapeutic radioisotope methods are discussed. The author is thoroughly familiar with the repertoire of cytostatic drugs in blood hyperplasias and hemoblastoses, including the preparations which were not yet commercially available in Germany when the book was written, but which had already been tested in various German research clinics (Triethylenemelamine, 6-Mercaptopurine, Myleran, Stilbamidine, Pentamidine, Aminopterin). Quite interesting is the description of the German cytostatic crystalline antibiotic Sanamycin or Actinomycin-C (Bayer) which has been used in Hodgkin's disease. Also the use of a newer colchicum alkaloid Demecolcin (Colcemid, Ciba-Switzerland) in the treatment of chronic myelogenous leukemia is mentioned. The section on hemorrhagic diseases is enjoyable because of its good didactic condensation for practical purposes. The section on bone marrow insufficiencies explains mechanical (neoplastic), toxic, infectious and allergic-immunological causes.

Very welcome is an appendix on available German and Swiss drugs, including the names and addresses of the manufacturers and descriptions of the commercial packages. Unfortunately, drugs from other countries were omitted in this section "because the necessary data were available only in part."

The international literature is systematically organized in a separate section and well covered, including 1954. The alphabetical author index is adequate but the corresponding subject index is deficient. The numerous graphs are very instructive and executed with great diligence; but many of them are multiple and overloaded



and would be easier to grasp if they had been presented as groups of single graphs. While the print is a masterpiece of legibility, the style is cluttered with rhetorical redundancies, patch words and exclamation marks which are a reflection of colloquialisms among students and young assistants but are damaging when permitted to invade an academic presentation.

From the viewpoint of clinical teaching and information supplied the book is of excellent practical value to students, general practitioners and clinicians.

ERNEST BRUCH, Ph.D., M.D.

*A Textbook of Psychology.* By DONALD OLDING HEBB, Ph.D., Professor and Chairman, Department of Psychology, McGill University. 276 pages; 24.5 x 16 cm. W. B. Saunders Company, Philadelphia. 1958. Price, \$4.50.

This book is a careful, scholarly presentation of psychology as fundamentally a biological science out of which social psychology and applied psychology developed as distinct but related disciplines. Professor Hebb is consistent throughout the entire text in emphasizing "biological" psychology.

Although considerably smaller than the usual "introductory" psychology textbook, Dr. Hebb has been successful in describing all the major areas of modern psychology within a scientific and theoretical framework that reflects the author's outstanding professional stature. He accomplishes his stated objective of providing the student with the "fundamental ideas of psychology as a science" and not the popularized "newspaper psychology."

Behavior, the subject matter of psychology, "consists of muscle activity and glandular secretions." Knowledge of neural anatomy and physiology is important for psychological purposes and this is adequately described in three of the thirteen chapters entitled Modes of Sensory Control, Nervous System, and Neural Transmission. Neurology, however, is no substitute for psychology and the complexity of events controlling behavior is too great to be analyzed in terms of nerve impulses or relations between specific CNS structures. Relatively large-scale psychological constructs are necessary in the understanding of organized behavior. These variables are developed and demonstrated in the chapters on learning, motivation, perception, thought processes and learning capacity.

In presenting psychology as a science, the author has developed a noteworthy primer in scientific thinking. The material is well organized and clearly presented although it is not casual reading material. It is written for the serious advanced student and could well be considered as required reading for the medical student. The "notes" at the end of each chapter refer to excellent and usually readily available references. In addition the author draws freely from his own experience at the Yerkes Primate Laboratory and presents not only interesting but also critical studies.

This reviewer would also recommend this book to physicians who would appreciate insight into basic psychology. Dr. Hebb has made a noteworthy contribution in presenting a refreshing "new look" at psychology.

S. S.

#### BOOKS RECENTLY RECEIVED

Books recently received are acknowledged in the following section. As far as practicable those of special interest will be selected for review later, but it is not possible to discuss all of them.

*Annual Epidemiological and Vital Statistics, 1955. Part I: Vital Statistics and Causes of Death. Part II: Cases of and Deaths from Notifiable Diseases. Part III: Statistics of Health Personnel, Hospital Establishments and Vaccinations.*

- 699 pages; 28 × 21.5 cm. (paper-bound). 1958. World Health Organization, Geneva; available in U. S. A. from Columbia University Press, International Documents Service, New York. Price, \$12.00.
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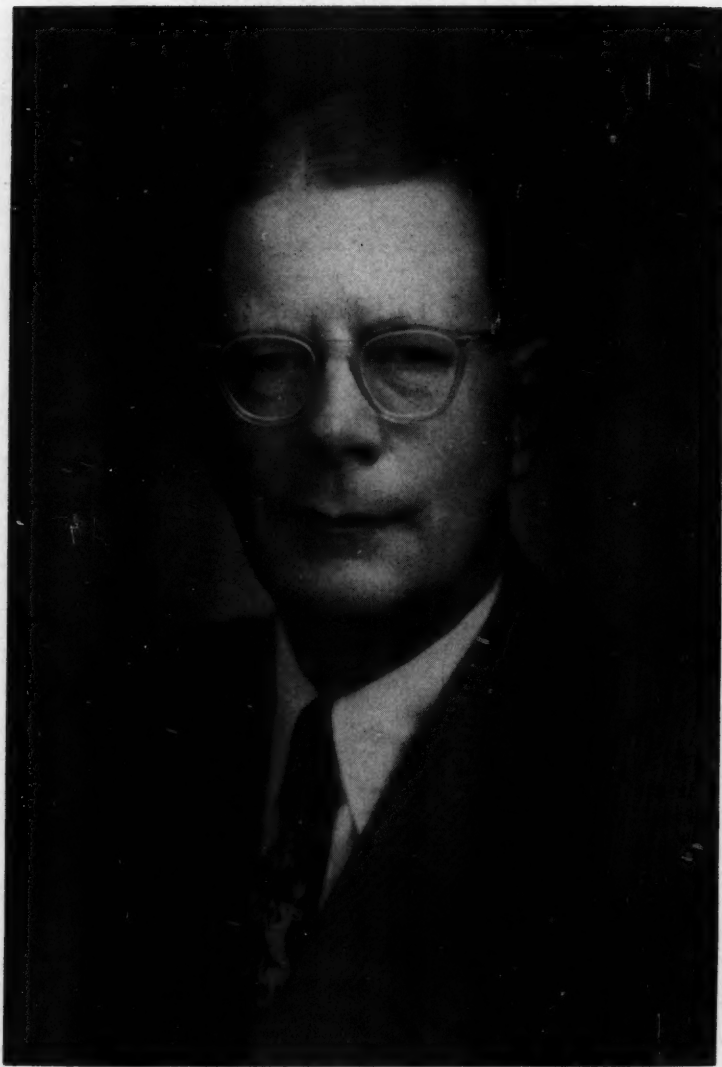
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4200 Pine Street, Philadelphia 4, Pennsylvania**

**By August 31, 1958**

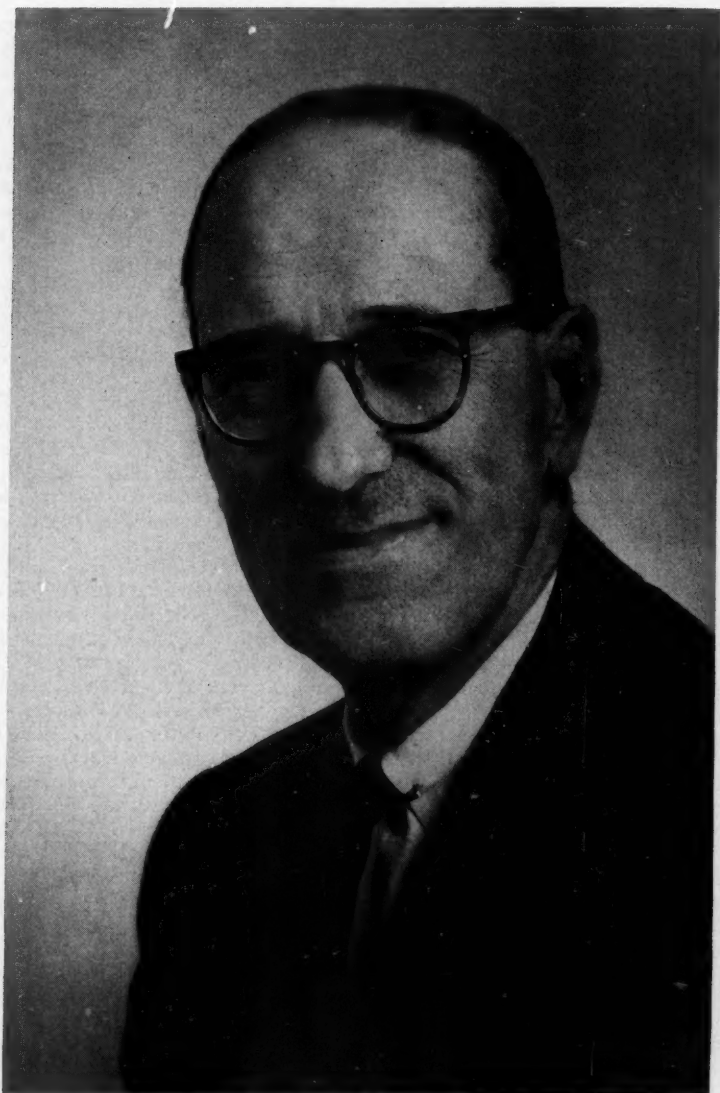


DWIGHT L. WILBUR, A.B., M.D., M.S. (Med.), F.A.C.P.  
San Francisco, Calif.  
President, American College of Physicians

## THE PRESIDENT

DWIGHT L. WILBUR, 655 Sutter Street, San Francisco 2, Calif. Born, September 18, 1903, Harrow-on-the Hill, England. A.B., 1923, Stanford University; M.D., 1926, with honors, University of Pennsylvania School of Medicine; M.S. (Med.), 1933, University of Minnesota. Resident Physician, Hospital of the University of Pennsylvania, 1926-28; Fellow in Medicine, 1929-31; First Assistant, Section on Pathologic Anatomy, 1929-30; First Assistant in Section on Medicine, 1931-33; Associate in Section on Medicine, 1933-37; Consulting Physician, 1931-37, Mayo Clinic, Rochester, Minn. Instructor and Assistant Professor of Medicine, Mayo Foundation, Graduate School, University of Minnesota, 1933-37. Assistant Clinical Professor of Medicine, 1937-40; Associate Clinical Professor of Medicine, 1940-49; Clinical Professor of Medicine since 1949, Stanford University School of Medicine. Chief of the Medical Service, French Hospital, since 1946; Staff, Stanford, Children's and Notre Dame Hospitals, since 1946; Consulting Physician, Southern Pacific Hospital, since 1949; Assistant Visiting Physician, San Francisco Hospital (Stanford Service) since 1937. Editor, *California Medicine*, since 1946; Associate Editor, *Gastroenterology*, 1943-51; Associate Editor, *Modern Medicine*, since 1950; Medical Advisory Board, *Postgraduate Medicine*, since 1951. Board of Directors, Hospital Service of California, 1946-51; Board of Directors, San Francisco Medical Society, 1946-51; Board of Directors, YMCA, 1941-47; Board of Directors, San Francisco Tuberculosis Association, 1948-53; Branch Section Chief in Gastroenterology (Branch 12, Veterans Administration), 1946-49; Area Section Chief in Internal Medicine and Gastroenterology, Veterans Administration, 1949-53; Expert Consultant, Department of the Army, Letterman Army Hospital, since 1946. Trustee, Lux College, 1949-54; Trustee, Miranda Lux Foundation, since 1954; Board of Members, Mayo Association, Rochester, Minn., since 1951. Lieutenant Commander and Commander, MC(S), USNR, active duty November 16, 1942, to April, 1946, U. S. Naval Hospital, Oakland; Assistant Chief and Chief of Medical Service, U. S. Naval Hospital, Oakland, 1945-46. Member, Civilian Health and Medical Advisory Council, Secretary of Defense, 1953-57; Member, Task Force, Commission on Re-organization of the Executive Branch of the Government, Hoover Commission, 1954-55. Member, Phi Beta Kappa, Alpha Omega Alpha, and Sigma Xi. Frederick A. Packard Prize in Clinical Medicine, University of Pennsylvania, 1926. Member, San Francisco Medical Society, California Medical Association (Councillor since 1946), and American Medical Association (Secretary, 1942-47, Vice Chairman, 1948-49, Section on Experimental Medicine and Therapeutics; Member, House of Delegates, 1942-45); Secretary, 1947-52; Second Vice President (1952), First Vice President (1953), and President (1954), American Gastroenterological Association; Emeritus Member, Central Society for Clinical Research; Member of Council, American Society for Clinical Investigation; Member, California Academy of Science, Association of American Physicians, American Diabetes Association, California Society of Internal Medicine, American Gastroscopic Society, and Fellow of the American Association for Advancement of Science; President, (1955), California Academy of Medicine; Member (1941-42) Health Council of Community Chest of San Francisco; Member (1941-42), California Nutrition Council; Member (1941-42), Subcommittee on Medical Nutrition, National Research Council; Secretary-Treasurer (1946-52), San Francisco Society of Internal Medicine; Member, Bohemian and Commonwealth Clubs, San Francisco; Diplomate, National Board of Medical Examiners and American Board of Internal Medicine (Internal Medicine and Gastroenterology).

The American College of Physicians—Fellow, 1935; Life Member, 1947; Governor for Northern California, 1947-51; Regent, 1951-57; President-Elect, 1957; installed as President, May 1, 1958; Member of many committees, past and present.



HOWARD P. LEWIS, B.S., M.D., F.A.C.P.,  
Portland, Ore.  
President-Elect, American College of Physicians

## THE PRESIDENT-ELECT

Howard P. Lewis, 3181 S. W. Sam Jackson Park Road, Portland 1, Oregon. Born, February 18, 1902, at San Francisco, California. B.S., Engineering, Oregon State College, 1924; M.D., University of Oregon Medical School, 1930. Internship and Residency served at the University of Oregon Medical School Hospitals and Clinics; Assistant in Anatomy, 1926-29, Instructor in Anatomy, 1929-30, Instructor in Medicine, 1929-30, Clinical Instructor in Medicine, 1932-36, Clinical Associate in Medicine, 1936-38, Assistant Clinical Professor of Medicine, 1938-42, Associate Professor of Medicine, 1946-47, Professor of Medicine and Head of Department, 1947 to date, University of Oregon Medical School; served in the U. S. Army Medical Department from 1942 to 1946, rising from Major to Colonel; Assistant Chief of Medical Service, Halloran General Hospital, Staten Island, N. Y., 1942-43; Chief of Medical Service, Rhoads General Hospital, Utica, N. Y., 1943-45; Consultant in Medicine, Second Service Command, Governor's Island, N. Y., 1945-46.

Past Chairman, Section on Internal Medicine, American Medical Association; Past President, North Pacific Society of Internal Medicine; Member of Council, American Clinical and Climatological Association; Vice Chairman, American Board of Internal Medicine; Member, Advisory Council of the National Heart Institute of the U. S. Public Health Service; Member, Pacific Interurban Clinical Club, American Heart Association, American Federation for Clinical Research, Western Society for Clinical Research, Western Association of Physicians, Association of American Physicians, Society of Medical Consultants to the Armed Forces, American Association for the Advancement of Science, Sigma Xi, Alpha Omega Alpha. Editor, *Modern Concepts of Cardiovascular Disease*, American Heart Association since 1956.

The American College of Physicians—Fellow, 1942; Governor for Oregon, 1948-51; Third Vice President, 1951-52; Regent, 1952-58; President-Elect, 1958-59; Member of many committees, past and present.



## ATLANTIC CITY A.C.P. SESSION

The 39th Annual Session of the American College of Physicians was held at Atlantic City, N. J., under the Presidency of Dr. Richard A. Kern, Philadelphia, Pa., and the General Chairmanship of Dr. James F. Gleason, Atlantic City, N. J., April 28 to May 2, inclusive, 1958.

The Atlantic City meeting was a signal meeting in the history of the College; the program was superior; many new features and fields were introduced; the gross attendance was 6,142, the third highest ever recorded for a College meeting (the registration in Philadelphia in 1955 was 6,380; at Boston in 1957, 6,724). Foreign members of the International Society of Internal Medicine who attended the Fifth International Congress of Internal Medicine, the week previous in Philadelphia, were invited as guests to the College meeting, thus producing the largest foreign physician attendance heretofore on record.

All scientific programs, the technical and scientific exhibits and the Convocation were held in Convention Hall. Never before have so many members registered their unqualified appreciation of the program and of the arrangements.

Other than the scientific program, the following features were of note: (1) A concert by the U. S. Navy Band. (2) A Reception tendered by the Governors of the College to new Members; this Reception was attended by a larger percentage of new members than during prior years. (3) The Annual Convocation; the Convocation was conducted in academic dress, a larger than normal audience was present. Honored guests included Dr. William L. Estes, Jr., Bethlehem, Pa., President of the American College of Surgeons; Dr. David B. Allman, Atlantic City, N. J., President of the American Medical Association; Dr. Walter de M. Scriver, Montreal, Canada, representing the President of the Royal College of Physicians of Canada; Sir W. Russell Brain, London, England, recent President of the Royal College of Physicians of London; and Dr. J. D. S. Cameron, Edinburgh, Scotland, Vice President of the Royal College of Physicians of Edinburgh.

President Richard A. Kern delivered the Presidential Address: "Fellowship and Citizenship," which essentially was a charge to the new Fellows.

Fellowships were conferred by the President upon 348 new Fellows. An Honorary Fellowship was conferred upon Dr. Eduardo Braun-Menéndez, Professor of Physiology at the University of Buenos Aires Medical School, Buenos Aires, Argentina. Masterships were conferred upon Dr. Chester Morse Jones, Boston, Mass., Walter Bramlette Martin, Norfolk, Va., and Dr. T. Grier Miller, Philadelphia, Pa. A scroll was presented to Dr. Maurice C. Pincoffs, Baltimore, Md., in special recognition of his having served as Editor of the *ANNALS OF INTERNAL MEDICINE* for the past 25 years.

The James D. Bruce Memorial Medal was awarded to Dr. Jonas E. Salk, Pittsburgh, Pa.; the John Phillips Memorial Medal was awarded to Dr. Amos Christie, Nashville, Tenn., and the Alfred Stengel Memorial Award was given to Dr. Alex. M. Burgess, Providence, R. I. The Convocation Oration was delivered by General Alfred M. Gruenther, U. S. Army (Ret.), President of the American National Red Cross. The President's Reception and Ball following the Convocation was held at the Haddon Hall Hotel.

(4) The Annual Banquet. Over 1,000 physicians and their ladies were in attendance; available facilities were inadequate to accommodate all who desired tickets. Dr. James F. Gleason, General Chairman of the Session, acted as Toastmaster. There was a brief concert by the Columbus Boychoir, of Princeton, N. J., under the direction of Mr. Donald T. Bryant. Miss America of 1958 (Miss Marilyn Van Derbur, of Denver, Colo.) presented greetings. The address of the day, "Changing Styles in American Humor," was delivered by Mr. Bennett Cerf, of New York City, publisher, humorist, author, and television panelist.

(5) An extensive program of entertainment was provided for the ladies, through the Committee on Women's Entertainment.

(6) A Post-Convention Tour, "The Bermuda Symposium," followed the Atlantic City meeting. Formal scientific programs were held aboard the Queen of Bermuda, on both the going and returning voyage, as well as a special program dealing with medical and health problems peculiar to Bermuda, at Hamilton. This program was presided over by Dr. Simon M. Frazer, Director of Health Services of Bermuda. 242 physicians and their wives participated in the cruise.

Dr. Dwight L. Wilbur, San Francisco, Calif., was installed as President of the College at the Annual Business Meeting. Dr. Howard P. Lewis, Portland, Ore., was made President-Elect; Dr. Charles A. Doan, Columbus, Ohio, 1st Vice President; Dr. Thomas M. McMillan, Philadelphia, Pa., 2nd Vice President; Dr. Charles H. Drenckhahn, Urbana, Ill., 3rd Vice President. Elected as new members of the Board of Regents were: Dr. Thomas Findley, Augusta, Ga., and Dr. William C. Menninger, Topeka, Kans. Re-elected to the Board of Regents were: Franklin M. Hanger, New York, N. Y., Dr. Richard A. Kern, Philadelphia, Pa., Dr. Joseph D. McCarthy, Omaha, Nebr., and Dr. Howard Wakefield, Chicago, Ill.

New members elected to the Board of Governors were: Dr. Theodore J. Abernethy, for the District of Columbia; Dr. Thomas D. Masters, for Southern Illinois; Dr. Kenneth G. Kohlstaedt, for Indiana; Dr. Fred J. McEwen, for Kansas; Dr. William A. Jeffers, for Eastern Pennsylvania; Dr. Donald Kegaries, for South Dakota; Dr. Hastings H. Walker, for Hawaii; Dr. W. Ford Connell, for Ontario.

Re-elected to the Board of Governors for term expiring in 1961 were: Dr. George C. Griffith, for Southern California; Dr. Constantine F. Kemper, for Colorado; Dr. John C. Leonard, for Connecticut; Dr. Richard P. Stetson, for Massachusetts; Dr. Edmond M. Walsh, for Nebraska; Dr. John H. Talbott, for Western New York; Dr. Bert F. Keltz, for Oklahoma; Dr. Frank J. Gregg, for Western Pennsylvania; Dr. Rudolph Kampmeier, for Tennessee; Dr. Theodore C. Bauerlein, for Utah; Dr. H. Archibald Des Brisay, for British Columbia; Dr. Ignacio Chavez, for Mexico; and Dr. Rolando A. Chanis, for the Republic of Panama and the Canal Zone.

At its closing session, the Board of Regents selected San Francisco as the site of the 1960 Annual Session, and Bal Harbour, Fla., for the 1961 Annual Session. (Bal Harbour is adjacent to Miami Beach, Fla., and has a great hotel, The Americana, in which can be accommodated all of the meetings, exhibits and other program features.)

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#### BOOK DONATED TO THE COLLEGE LIBRARY OF PUBLICATIONS BY MEMBERS

The College gratefully acknowledges receipt of the following book from members of the College to the Memorial Library of the College:

Edward H. Bensley, M.D., F.A.C.P., and Guy E. Joron, M.D., F.A.C.P., Montreal, Que., Can., *TREATMENT OF ACUTE POISONING*, published by E. & S. Livingstone, Ltd., Edinburgh and London, 1958, 212 pages.

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#### NEW LIFE MEMBERS

The College acknowledges with pleasure the following Fellows as new life members:

Dr. Robert K. Dixon, Detroit, Mich.  
Dr. James R. Green, San Jose, Calif.

## COMING REGIONAL MEETINGS

<u>State</u>	<u>City</u>	<u>Date</u>	<u>Governor(s)</u>	<u>Official Guest(s)</u>
North Dakota Michigan	Fargo Traverse City	September 6, 1958 September 19-20, 1958	R. O. Goehl, M.D., F.A.C.P. H. Marvin Pollard, M.D., F.A.C.P.	Dwight L. Wilbur, President E. R. Loveland, Exec. Sec. Chester S. Keefer, Regent
Idaho-Utah	Sun Valley, Idaho	September 27, 1958	Richard P. Howard, M.D., F.A.C.P.	
Midwest (Ill., Ind., Iowa, Minn., Wis.) Western New York	Milwaukee, Wis. Syracuse	September 27, 1958 October 3, 1958	T. C. Bauerlein, M.D., F.A.C.P. F. W. Madison, M.D., F.A.C.P.	
Southeastern (Ala., Fla., Ga., Miss., S. C., Cuba)	Biloxi, Miss.	October 3-4, 1958	John H. Talbott, M.D., F.A.C.P. D. O. Wright, M.D., F.A.C.P.	
Montana-Wyoming	Casper, Wyo.	October 10-11, 1958	Wayne Gordon, M.D., F.A.C.P.	
Arkansas-Oklahoma	Hot Springs, Ark.	October 18, 1958	John N. Compton, M.D., F.A.C.P.	Dwight L. Wilbur, President
Arizona Kentucky-Tennessee	Phoenix Louisville, Ky.	October 18, 1958 October 18, 1958	William R. Hewitt, M.D., F.A.C.P. Sam A. Overstreet, M.D., F.A.C.P. Rudolph H. Kampmeier, M.D., F.A.C.P.	Charles A. Doan 1st Vice Pres.
Eastern Canada and New England States (Quebec, Newfoundland, Nova Scotia, New Brunswick, Ontario, Conn., Maine, N. H., Mass., R. I., Vt.) New Jersey	Quebec, P.Q.	November 7-8, 1958	Walter de M. Scriver, M.D., F.A.C.P.	Dwight L. Wilbur, President E. R. Loveland, Exec. Sec.
North Carolina	Newark Winston-Salem	November 12, 1958 December 4, 1958	Edward C. Klein, Jr., M.D., F.A.C.P. Elbert L. Persons, M.D., F.A.C.P.	Dwight L. Wilbur, President

## CERTIFYING BOARD EXAMINATIONS

American Board of Dermatology—Beatrice Maher Kesten, M.D., Secretary, One Haven Ave., New York 32, N. Y.

Oral examination, (Henry Ford Hospital, Detroit, Mich.), October 17-19, 1958.

American Board of Internal Medicine—William A. Werrell, M.D., Executive Secretary-Treasurer, One W. Main St., Madison 3, Wis.

Oral examination, (Chicago, Ill.), October 13-16, 1958.

The American Board of Pediatrics—John McK. Mitchell, M.D., Executive Secretary, 6 Cushman Road, Rosemont, Pa.

Oral examinations: (Chicago, Ill.), October 24-26, 1958; (New York, N. Y.), December 5-7, 1958.

American Board of Psychiatry and Neurology—David A. Boyd, Jr., M.D., Secretary-Treasurer, 102-110 Second Ave., S.W., Rochester, Minn.

Examinations: (New York, N. Y.), December 15-16, 1958; (New Orleans, La.), March 16-17, 1959.

The American Board of Radiology—H. Dabney Kerr, M.D., Kahler Hotel Bldg., Rochester, Minn.

Examination, (Shoreham Hotel, Washington, D. C.), December 8-12, 1958.

## FOREIGN CERTIFICATION BY AMERICAN BOARD OF PSYCHIATRY AND NEUROLOGY

It is the intention of the American Board of Psychiatry and Neurology to undertake Special Foreign Certification of physicians who are not residents of the United States or Canada, not holding licensure for the practice of medicine in those countries and not contemplating medical practice in those countries, by a certifying examination after completion of prescribed requirements. For details and regulations, write to the Secretary-Treasurer, American Board of Psychiatry and Neurology, 102-110 Second Ave., S.W., Rochester, Minn.

## FIFTH INTERNATIONAL CONGRESS OF INTERNAL MEDICINE

The first International Congress of Internal Medicine to be held in the United States proved to be the largest meeting of the International Society of Internal Medicine to be conducted during the ten years in which the Society has been active. Nine hundred seventy-one officially registered for the two and one-half day meeting at the Sheraton Hotel in Philadelphia, Pa., April 24-26, 1958. Of this number, 751 were physicians and 220 were wives and special guests. Countries with the largest delegations were as follows: United States, 551; Canada, 33; England, 25; Switzerland, 12; Japan, 10, and Germany, 10. Two hundred and one physicians from foreign countries represented a total of 43 nations.

In an official greeting to the Congress from President Eisenhower, presented by Dr. Leroy E. Burney, F.A.C.P., Surgeon General of the United States Public Health Service, Washington, D. C., at the Congress banquet, the President said, "This meeting is a fine example of a scientific exchange now going on among the peoples of the world. It is a practice which, I believe, is essential for the peace of mankind."

Mr. E. R. Loveland, F.A.C.P. (Hon.), Philadelphia, Pa., who served as Secretary-General of the Congress, reported that, under the sponsorship of the Congress by the American College of Physicians, the interest of American physicians in the activities of the International Society of Internal Medicine has increased markedly. He pointed to the growth of the American membership in the Society which, during the past year, had increased from 135 to over 2,000.

Dr. T. Grier Miller, M.A.C.P., past President of the College, Philadelphia, Pa., who served as President of the Fifth Congress, was elected an Honorary Member of the International Society, at its Executive Committee meeting on April 25.

The scientific program began on Thursday, April 24, with a series of special lectures, followed by a panel on "Anticoagulant Therapy" and symposia on "Cardiac Diseases," "Vascular Diseases," "Hematology," and "Cancer and Radioactive Therapy." On Friday, the program featured a panel on "Arthritis and Rheumatism," followed by a series of special lectures and symposia on "Vaccinations and Poliomyelitis," "Gastroenterology," "Endocrinology and Diabetes," and "Current Management of Tuberculosis." The final session on Saturday included a panel on "Rehabilitation" and "Cardiovascular Surgery" and a series of special lectures. One hundred and twenty-nine physicians presented papers or appeared on the panels.

At the closing ceremonies, Sir Russell Brain, F.A.C.P. (Hon.), London, England, President of the International Society of Internal Medicine, announced that the Sixth Congress will be held in Bern, Switzerland, in October, 1960.

Ninety foreign physicians who were in attendance at the Congress were guests of the American College of Physicians at its 39th Annual Session in Atlantic City, N. J., April 28-May 2. Eighteen stayed on for the Post-Congress Tour, May 7-15, to visit medical centers in Washington, D. C., Baltimore, Md., Ann Arbor, Mich., Boston, Mass., and New York, N. Y.

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#### RESIDENCY TRAINEESHIPS IN PSYCHIATRY

Special four-to-five year traineeships in psychiatry are available for those seeking careers in academic psychiatry. The fellowships offer a broad and integrated training in basic clinical research and clinical psychiatry. The program is jointly sponsored by the Institute of the Pennsylvania Hospital in cooperation with the Institute of Neurological Sciences, of the University of Pennsylvania School of Medicine, Philadelphia, Pa. The stipends will vary according to the applicant's qualifications and research experience, and are commensurate with postdoctoral traineeships. Candidates must be graduates of American Medical Association approved medical schools. For information write the Director of Research, The Institute of the Pennsylvania Hospital, Philadelphia 39, Pa.

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#### FELLOWSHIPS IN NUTRITION RESEARCH

The Nutrition Foundation, in cooperation with the American Medical Association's Council on Foods and Nutrition, offers six fellowships at \$200 per month for three months in an effort to stimulate medical school staff members and students to take a more active interest in the science of nutrition. The fellowships are in honor of Dr. Paul Gyorgy, F.A.C.P., Philadelphia, Pa., who was the recipient of the 1957 Goldberger Award in Clinical Nutrition. Write to the Council on Foods and Nutrition, A.M.A., 535 N. Dearborn, Chicago 10, Ill.

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#### COURSE IN GASTROENTEROLOGY

The American College of Gastroenterology announces that its Annual Course in Postgraduate Gastroenterology will be given at the Jung Hotel in New Orleans, La., on October 23-25, 1958. The course will be under the direction and co-chairmanship of Dr. Owen H. Wangenstein, Professor of Surgery of the University of Minnesota Medical School, who will serve as Surgical Coordinator and Dr. I. Snapper, F.A.C.P., Director of Medical Education, Beth-El Hospital, Brooklyn, N. Y., who will serve as Medical Coordinator. Drs. Wangenstein and Snapper will be assisted by a distinguished faculty selected from the medical schools in and around New Orleans.

The subject matter to be covered in the course, from a medical as well as surgical viewpoint, will be essentially the advances in diagnosis and treatment of gastro-



intestinal diseases and a comprehensive discussion of diseases of the mouth, esophagus, stomach, pancreas, spleen, liver and gallbladder, colon and rectum.

For further information and enrollment, write to the American College of Gastroenterology, 33 W. 60th St., New York 23, N. Y.

#### COURSES OFFERED IN DERMATOLOGY AND SYPHILOLOGY

The New York University-Bellevue Medical Center Post-Graduate Medical School offers the following courses by the Department of Dermatology and Syphilology under the direction of Dr. Marion B. Sulzberger, F.A.C.P.:

**Comprehensive Review in Dermatologic Histopathology:** A full-time intensive course, September 8-12, 1958. A complete review of both the normal histology of the skin and the essential histopathology of diseases of the skin. Tuition: \$85.

**Dermatology and Syphilology (for Pediatricians):** An intensive full-time review course, October 6-10, 1958. Includes clinical sessions and demonstrations of patients together with the application of modern diagnostic and therapeutic modalities, illustrations of common and rare skin diseases, and illustrated lectures covering differential diagnosis, causes, and newest forms of treatment. Tuition: \$85.

**A Seminar in Dermatology and Syphilology (for General Physicians):** A full-time intensive course, February 16-20, 1959. Consists of illustrated lectures and demonstrations of patients and methods. Tuition: \$85.

**Symposium on Dermatology and Syphilology (for Dermatologists):** A full-time course, May 18-22, 1959, consisting of a survey and critical evaluation of recent advances and research in Dermatology and Syphilology. Demonstration of patients and application of new techniques are included. Tuition: \$100.

For further information, write to: Associate Dean, New York University Post-Graduate Medical School, 550 First Ave., New York 16, N. Y.

#### THE SECOND OKLAHOMA COLLOQUY ON ADVANCES IN MEDICINE

The second Oklahoma Colloquy on Advances in Medicine will be held at Oklahoma City on November 12-15, 1958. It will be jointly sponsored by the Department of Medicine of the University of Oklahoma School of Medicine, the Division of Postgraduate Education, Geigy Pharmaceuticals, Wyeth Laboratories, The Upjohn Company, Pfizer Laboratories, and Schering Corporation. Among the twelve prominent investigators who will present the results of original work in their laboratories will be: Dr. Alex. B. Gutman, F.A.C.P., Director of the Department of Medicine at The Mount Sinai Hospital, New York, N. Y.; Dr. John H. Talbott, F.A.C.P., Professor of Medicine at the University of Buffalo School of Medicine at Buffalo, N. Y., and Dr. Morris Ziff, (Associate), Associate Professor of Medicine at the New York University College of Medicine in New York, N. Y. For information write to the Division of Postgraduate Education, University of Oklahoma School of Medicine, Oklahoma City, Okla.

#### PROFESSIONAL ACTIVITY STUDY REPORTS MILLIONTH PATIENT

A recent Newsletter from the Commission on Professional and Hospital Activities reported that from January, 1953, until March, 1958, the Professional Activity Study had processed a million medical records. At the present rate of 700,000 discharges per year, from 81 hospitals, the next million should take only one and one-half years to complete.

## JEFFERSON MEDICAL COLLEGE OF PHILADELPHIA NAMES NEW DEAN

Dr. William A. Sodeman, F.A.C.P., Magee Professor of Medicine and Head of the Department of Medicine of the Jefferson Medical College of Philadelphia, was recently named Dean of the College to succeed Dr. George A. Bennett who died in February, 1958. Dr. Sodeman is a graduate of the University of Michigan Medical School. He was a former member of the Executive Faculty of Tulane University of Louisiana School of Medicine. In 1953, he became a Professor of Medicine at the University of Missouri School of Medicine, from which position he resigned to accept the position of Head of the Department of Medicine at Jefferson Medical College of Philadelphia. He is the author of a text book on Pathological Physiology and has contributed numerous scientific papers to medical literature. His investigative activities have been in the field of electrocardiography and in clinical fields of internal medicine.

## DIVISION ON RESEARCH ON AGING

The Department of Medicine and Surgery of the Veterans Administration, Washington, D. C., recently announced the creation of a new division which will conduct research in aging, coordinate the numerous studies of associated disorders with aging being conducted in Veterans Administration Hospitals and survey the possibilities for study in retarding physical and mental deterioration. Dr. William D. Stroud, F.A.C.P., Professor of Cardiology of the University of Pennsylvania Graduate School of Medicine, Philadelphia, Pa., and Dr. Eugene M. Landis, F.A.C.P., George Higginson Professor of Physiology, Harvard Medical School, Boston, Mass., are serving as members of a five-man advisory committee to guide the program.

## WEST VIRGINIA SOCIETY OF INTERNAL MEDICINE

At a recent initial meeting of the Executive Committee and Council of the West Virginia Society of Internal Medicine, the following members of the College were named as officers: Dr. Pat A. Tuckwiller, F.A.C.P., Charleston, W. Va., President-Elect; Drs. Adam B. C. Ellison, (Associate), William E. Bray, Jr., (Associate), William A. Thornhill, Jr., F.A.C.P., and Walter E. Vest, F.A.C.P., of Huntington, W. Va., were named as members of the Council.

## AMERICAN RADIUM SOCIETY ANNOUNCES FUTURE MEETINGS

The American Radium Society which is composed of radiologists and other physicians who use radium, x-rays and radioactive isotopes in the treatment of disease, will hold its future meetings as follows: 1959—Hot Springs, Va., The Homestead, April 6-8; 1960—San Juan, Puerto Rico, March 17-19; 1961—Colorado Springs, Colo., The Broadmoor, May 11-13.

## ISRAEL MEDICAL ASSOCIATION SPONSORS ISRAEL TOUR

The Israel Medical Association will sponsor an all-inclusive tour to Israel for the 4th World Medical Assembly of the Israel Medical Association, to be held in Tel Aviv, Haifa, Jerusalem, August 12-24, 1958. The tour group will leave New York City via El Al Israel Airlines on August 9 and will return on August 24. For information write the national office at 1330 Beacon St., Brookline 46, Mass.

#### 8TH WORLD CONGRESS OF THE INTERNATIONAL SOCIETY FOR THE WELFARE OF CRIPPLES

The 8th World Congress of the International Society for the Welfare of Cripples will be held in New York, N. Y., August 29, 1960. Dr. Howard A. Rusk, F.A.C.P., Professor and Chairman of the Department of Physical Medicine and Rehabilitation at the New York University College of Medicine, New York, N. Y., will serve as President of the Congress. The National Society for Crippled Children and Adults will serve as the host organization. For information, write the National Society for Crippled Children and Adults, 11 S. La Salle St., Chicago 3, Ill.

#### SECOND WORLD CONFERENCE ON MEDICAL EDUCATION

The 2nd World Conference on Medical Education, which will be held in Chicago, Ill., August 30 to September 4, 1959, will feature the theme, "Medicine—A Lifelong Study." The scope of the program will include specialist training, the development of teachers and investigators and the means by which the practitioner can avail himself of the newest findings for use in the medical care he gives his patients. Approximately 100 invited speakers from more than 50 countries will present papers. Simultaneous translation will be provided for English, Spanish and French. Dr. Raymond B. Allen, F.A.C.P., Chancellor of the University of California at Los Angeles, will serve as President of the Conference and Drs. Ray F. Farquharson, F.A.C.P., Sir John and Lady Eaton Professor of Medicine of the University of Toronto Faculty of Medicine, Toronto, Ont., Can., and Victor Johnson, F.A.C.P., Director of Mayo Foundation for Medical Education and Research, University of Minnesota, Graduate School of Medicine in Rochester, Minn., will both serve as Deputy Presidents. For information, write to the World Medical Association, 10 Columbus Circle, New York 19, N. Y.

#### SCHERING AWARD COMPETITION

The Schering Award initiated in 1940 by the Schering Corporation is intended to encourage medical student interest and activity in the field of medical communications. The award has effectively encouraged publication of clinical research developments, since many of the award winners have later made notable contributions to the nation's professional journals. A total of \$5,700 in cash prizes will be awarded for entries in the competition in 1958. Topics selected for the competition are: "The Uses of Tranquilizer Therapy in Office Practice," "The Mechanism and Current Concepts of Treatment of Nausea and Vomiting," and "Current Trends in Corticosteroid Therapy in Pediatrics." Contest rules and entry blanks are available at all medical schools.

#### PERSONAL NOTES

Dr. Alfred S. Dooneief, F.A.C.P., Mt. Kisco, N. Y., was recently elected President-Elect of the Westchester Chapter of the American Federation for Clinical Research.

Dr. Rudolf Schindler, F.A.C.P., Los Angeles, Calif., has accepted an appointment as Professor of Medicine at the Universidade de Minas Gerais, Belo Horizonte, Brazil, starting in July, 1958.

Dr. A. Ford Wolf, F.A.C.P., Temple, Tex., was a guest speaker at the recent Regional Meeting of the American College of Physicians at Honolulu, Hawaii. His subject was "Clinical Uses of Hormonal Products."

Dr. Lowell A. Rantz, F.A.C.P., Professor of Medicine at the Stanford University School of Medicine, San Francisco, Calif., was a speaker at the 43rd Annual Meeting of the Alumni Association of the University of Oregon Medical School held at Portland, Ore., April 16-18, 1958.

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Dr. William B. Sherman, F.A.C.P., New York, N. Y., President of the American Academy of Allergy, discussed the subject, "The Nature of Allergy," and Dr. Orval R. Withers, F.A.C.P., Kansas City, Mo., presented the presidential address at the 14th Annual Congress of the American College of Allergists held in Atlantic City, N. J., April 23-25, 1958.

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Dr. Ernest E. Irons, M.A.C.P., Chicago, Ill., and Dr. Josiah J. Moore, F.A.C.P., Chicago, Ill., were members of a five-man Board which reported on the ten-year progress made by the Municipal Tuberculosis Sanitarium in the City of Chicago. Dr. Irons has served as President and Dr. Moore as Vice President of the Board. The report reviewed the progress made during the past ten years and summarized the current and future problems which face the community in controlling tuberculosis.

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Dr. Joseph L. Hollander, F.A.C.P., Philadelphia, Pa., served as Chairman of the Scientific Program for the Annual Meeting of the American Rheumatism Association, San Francisco, Calif., June 20-21, 1958.

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Dr. Rudolph H. Kampmeier, F.A.C.P., Head of the Department of Medicine at Vanderbilt University School of Medicine, Nashville, Tenn., and the American College of Physicians Governor for the State of Tennessee, was named the "Physician of the Year" for the State of Tennessee by the Tennessee State Medical Association on April 21, 1958, at the 123rd Annual Meeting of the Association at Gatlinburg, Tenn. The award is presented annually to the physician doing the most "to improve the level of medical service in Tennessee." Dr. Joseph W. Johnson, Jr., F.A.C.P., Chattanooga, Tenn., moderated a symposium on "Emotional Illnesses," at the meeting.

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Dr. Nils P. Larsen, F.A.C.P., for the past nine years College Governor for Hawaii, addressed the Second World Congress on the Prevention of Occupational Accidents, at Brussels, Belgium, May 19-24. Dr. Larsen's paper was based on the excellent work on accident prevention which has taken place on the sugar plantations in Hawaii.

Dr. Larsen was also the keynote speaker at a Student Conference on Public Health, held at the American University of Beirut, Lebanon.

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Dr. Harold A. Hanno, F.A.C.P., Philadelphia, Pa., discussed the subject, "Ocular Manifestations of Hematologic Disease," at the Ophthalmology Section of the Los Angeles Society of Ophthalmology and Otolaryngology on April 3, 1958.

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Dr. Harold E. Himwich, F.A.C.P., Director of the Research Division of the Galesburg State Research Hospital, Galesburg, Wis., discussed "Tranquilizing Drugs in Modern Medicine," at the annual Arthur S. Loevenhart Lectureship sponsored by the Phi Delta Epsilon Fraternity and held at the University of Wisconsin on April 1, 1958.

Dr. Raymond R. Suskind, (Associate), Cincinnati, Ohio, served as a member of the Organization Committee to form the Noah Worcester Dermatological Society under the sponsorship of the Department of Dermatology at the University of Cincinnati College of Medicine. The new organization will "sponsor scientific meetings and foster reunions of former residents and fellows, members of the faculty and members of the Cincinnati Dermatological Society."

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Dr. F. Curtis Dohan, F.A.C.P., Camden, N. J., moderated a symposium on "Convalescence Following Illness and Injury," at the 13th National Industrial Health Conference held at Atlantic City, N. J., April 19-25, 1958.

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Rear Admiral E. C. Kenney, (Associate), (MC), USN, was one of the speakers at the Military Medical Symposium on Special Weapons and Management of Mass Casualties, held at the U. S. Naval Medical School, National Naval Medical Center, Bethesda, Md. on April 26, 1958.

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Dr. M. Coleman Harris, F.A.C.P., Attending Physician (Allergy) at the Children's Hospital, San Francisco, Calif., recently participated in a Postgraduate Course in Allergy, under the auspices of the University Extension, University of California School of Medicine, San Francisco, Calif. His subject was "An Evaluation of the Drugs Used in the Management of Allergic Disease."

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Dr. Louis G. Welt, F.A.C.P., Professor of Medicine of the University of North Carolina School of Medicine, Chapel Hill, N. C., was recently elected President of the Southern Society for Clinical Research.

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Dr. Thomas F. Sellers, F.A.C.P., Atlanta, Ga., was recently elected a Vice-President of the American Public Health Association.

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Dr. Bernard E. Nunez, F.A.C.P., Washington, D. C., was recently elected 1st Vice-President of the Pan-American Medical Society.

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Dr. Leonard G. Rowntree, F.A.C.P., Miami, Fla., recently received an honorary degree of Doctor of Letters from the University of Miami School of Medicine for "his great contribution to the progress of medicine and his role in the founding of the University of Miami School of Medicine."

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Dr. Thomas F. Frawley, F.A.C.P., Associate Professor of Medicine and Director of the Department of Endocrinology and Metabolism at the Albany Medical College of Union University, Albany, N. Y., served as Chief of Medicine, Pro Tempore, at the St. Vincent's Hospital in Worcester, Mass., on April 10-11, 1958. On April 12, Dr. Frawley addressed the House Officers Association at the Rhode Island Hospital, Providence, R. I., and discussed the subject, "Recent Advances in Endocrinology."

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Dr. Walter C. Alvarez, F.A.C.P., Professor of Medicine Emeritus, University of Minnesota, Mayo Foundation, Rochester, Minn., presented the C. W. M. Poynter Lecture for 1958, at a meeting sponsored by the University of Nebraska College of Medicine at Omaha, Nebr., April 10, 1958.



Dr. Chester S. Keefer, F.A.C.P., Boston, Mass., will participate in the establishment of a program of research and training in the interdisciplinary areas of law, medicine, and the behavioral sciences, in the newly created Law-Medicine Research Institute, Boston University.

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Dr. E. Grey Dimond, F.A.C.P., Professor and Chairman of the Department of Medicine at the University of Kansas School of Medicine, Kansas City, Kans., presented a paper on "Clinical Study of Internal Mammary Artery Ligation for Angina Pectoris with Sham Operation" at the American College of Cardiology symposium on "Drugs," in St. Louis, Mo., May 22-23, 1958.

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Four Fellows of the College appeared on the program of the 166th Annual Meeting of the Connecticut State Medical Society held at Stratford, Conn., April 29-May 1, 1958. Dr. Wesley W. Spink, Minneapolis, Minn., discussed "Staphylococci and the Use of Antibiotics"; Dr. Lewis H. Bronstein, New York, N. Y., "Rehabilitation of the Patient with Coronary Artery Disease"; Dr. Robert P. McCombs "Reactions Due to Drug Idiosyncrasy," and Dr. Cornelius P. Rhoads, New York, N. Y., "Progress in Cancer Research."

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Major General Paul I. Robinson, F.A.C.P., (MC) U. S. A., Executive Director of the Office for Dependents' Medical Care, Department of the Army, Washington, D. C., was a speaker at the 8th Annual County Society Officers Conference sponsored by the Kentucky State Medical Association, March 27, 1958.

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Dr. Robert H. Ebert, F.A.C.P., Western Reserve University School of Medicine, Cleveland, Ohio, discussed the subject, "New Horizons in Research," at the Annual Meeting of the California Tuberculosis and Health Association at San Mateo, Calif., April 10-12, 1958.

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Brig. Gen. James H. Forsee, F.A.C.P., Army Medical Corps, was awarded a Certificate of Merit by the University of Missouri General Alumni Association at ceremonies in St. Louis, Mo., on April 15, 1958. General Forsee is Chief of the Department of Surgery and Chief of Professional Service at Walter Reed Army Hospital in Washington, D. C. From March 1956 until March 1957, the General was Chief Surgical Consultant to the Army Surgeon General in Washington, D. C.

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Dr. Philip C. Johnson, (Associate), Oklahoma City, Okla., discussed the subject, "Radioiodine-Therapeutic Problems in Thyroid Disease," at the 3rd Annual Meeting of the Southwestern Society of Nuclear Medicine, Dallas, Tex., April 12-13, 1958.

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Dr. Joseph B. Wolffe, (Associate), Philadelphia, Pa., attended the 12th Congress of the International Federation of Sports Medicine in Moscow, U.S.S.R., May 29-June 3, 1958. He discussed his studies with the role of physical activity in the treatment and possible control of hardening of the arteries. Dr. Wolffe is the Medical Director and Founder of the Valley Forge Heart Hospital and Medical Center in Pennsylvania.

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Dr. Maston K. Callison, F.A.C.P., Memphis, Tenn., became Dean of the University of Tennessee College of Medicine on July 1, 1958. Dr. Callison served for several years as Chief of Staff of the City of Memphis Hospitals.

Dr. Henry A. Monat, F.A.C.P., Washington, D. C., presented a paper on "Constipation," before the International Academy of Proctology in Mexico City, April 10, 1958.

Dr. William P. Boger, F.A.C.P., presently Director of Research at the Norris-town State Hospital and Chief of Infectious Diseases, Montgomery Hospital, Norristown, Pa., left April 7 for an around-the world lecture tour from which he returned on May 18. The trip took him to Hawaii, Japan, Hong Kong, Bangkok, Singapore, New Delhi, Bombay, Beirut and Rome. At each of these places, Dr. Boger addressed university groups and medical societies on the subjects of: "Antibiotics—Their Use and Abuse"; "The Sulfonamides—New and Old"; "The Staphylococcus Problem," and "The Asiatic Flu." These subjects cover clinical investigations and research work carried out by Dr. Boger during the past few years.

Dr. Boger is a graduate of Harvard University, a specialist in internal medicine, a member of many learned societies, and a contributor of more than 100 articles to the medical literature. In 1954, Dr. Boger made a similar lecture tour to Scandinavia, Germany and England.

As of April 15, 1958, Dr. Nathan Pensky (Associate), Brooklyn, N. Y., changed his name legally to Dr. Nathan Pensley.

Dr. David A. Newman, F.A.C.P., Palm Beach, Fla., spoke at the Annual Meeting of the Florida Medical Association, May 13, 1958, at Bal Harbour, Fla., on the subject, "The Reversal of Intractable Cardiac Edema." His presentation was a part of a symposium on Recent Advances in Modern Methods of Diagnosis and Therapy.

A memorial conference room to be constructed on top of the new five-story service wing of the St. Alexis Hospital, Cleveland, Ohio, will honor the memory of the late Dr. Harry V. Paryzek, F.A.C.P., former Chief of Staff and Director of Medicine at that hospital. The surgical and medical staffs of the hospital are co-operating to raise the necessary funds. The Chairman of the Committee may be addressed at 5163 Broadway Ave., Cleveland 27, Ohio.

Dr. Theodore L. Badger, F.A.C.P., Boston, Mass., discussed the subject, "a New Look at an Old Problem—Sex and Tuberculosis," at the annual meeting of the New York Tuberculosis and Health Association, New York City, April 30, 1958. Dr. Badger is President of the American Trudeau Society.

ON THE IMMEDIATELY FOLLOWING  
PAGES APPEAR THE PERSONNEL OF  
OFFICERS, REGENTS, GOVERNORS, AND  
COMMITTEES OF THE AMERICAN COL-  
LEGE OF PHYSICIANS AS ELECTED OR  
APPOINTED, AND INSTALLED AT THE  
ANNUAL BUSINESS MEETING, ATLANTIC  
CITY, N. J., MAY 1, 1958.

#### FUTURE ANNUAL SESSIONS

1959—Chicago, Ill., April 20-24.

1960—San Francisco, Calif., April 4-8.

1961—Bal Harbour, Fla., May 8-12.

## THE AMERICAN COLLEGE OF PHYSICIANS

### OFFICERS, 1958-59

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### REGENTS

(Including above Officers)

#### *Term Expiring 1959*

FULLER B. BAILEY, Salt Lake City, Utah

THOMAS FINDLEY, Augusta, Ga.

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RICHARD P. STETSON, Boston, Mass.

**SPECIAL ANNOUNCEMENT**

**PAPERS FOR FORTIETH ANNUAL SESSION**

**April 20-24, 1959, Chicago**

The Program Committee Desires Original Contributions Concerning:

**1. CLINICAL INVESTIGATION**

**2. BASIC MEDICAL SCIENCES as related to  
Internal Medicine**

**3. CLINICAL STUDIES AND OBSERVATIONS**

Please send titles, authors' names and informative abstracts of approximately 250 words for consideration by the Committee on Program

**THE AMERICAN COLLEGE OF PHYSICIANS  
4200 Pine Street, Philadelphia 4, Pennsylvania**

**By August 31, 1958**

## COLLEGE NEWS NOTES

### BOOKS DONATED TO THE COLLEGE LIBRARY OF PUBLICATIONS BY MEMBERS

The College gratefully acknowledges receipt of the following books from members of the College to the Memorial Library of Publications by Members of the College:

Robert Collier Page, M.D., F.A.C.P., New York City, *IT PAYS TO BE HEALTHY*, published by Prentice-Hall, Inc., Englewood Cliffs, N. J., 1957, 285 pages.

Lemuel C. McGee, Ph.D., M.D., F.A.C.P., Wilmington, Del., *MANUAL OF INDUSTRIAL MEDICINE*, published by University of Pennsylvania Press, 1956 (Third Edition), 212 pages.

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### NEW LIFE MEMBERS

Dr. Joel J. Brenner, Rockville Centre, N. Y.

Dr. Milton Ende, Petersburg, Va.

Dr. Jack S. Goltman, Memphis, Tenn.

Dr. Seymour L. Halpern, New York, N. Y.

Dr. Frank E. Hurley, Springfield, Mass.

Dr. Mortimer L. Schwartz, Maplewood, N. J.

Dr. Leon M. Simms, Brooklyn, N. Y.

Dr. Frederick A. Thompson, Jr., Lenoir, N. C.

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### UNIVERSITY OF PENNSYLVANIA ANNOUNCES NEW MEDICAL ACADEMIC PROGRAM

The University of Pennsylvania Graduate School of Medicine has announced it will offer a new, two-semester academic program starting September, 1958. The first four-month period will be devoted to a concentrated review in the basic medical sciences with integrated clinical instruction as it applies to the individual specialties. The second, or clinical semester, will be devoted largely to clinical and applied aspects of these sciences in the particular specialty of the physician student. Dr. George B. Koelle, Dean of the Graduate School of Medicine, indicates that this will be the first school in the country to offer this type of training during an eight-month period with a full-time academic and professional faculty. It is anticipated that the program will be of particular value to foreign physicians, those American physicians who wish to enter specialty training after a period of general practice, or those who wish to take a graduate refresher course after discharge from military service.

Write the University of Pennsylvania Graduate School of Medicine, Philadelphia 4, Pa.

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### PART-TIME COURSE OFFERED IN "OCCUPATIONAL HEALTH FOR PHYSICIANS"

The New York University Post-Graduate Medical School announces a new part-time course, "Occupational Health for Physicians," to be given on Thursdays, 2 to 5 p.m., from September 18, 1958, to May 14, 1959. This course constitutes an intensive survey of the field of occupational health and is designed to meet the requirements of those physicians unable to take a full-time program. The course is to be given under the sponsorship of the Medical Society of the State of New York, it was announced by Dr. Norton Nelson, Professor and Chairman of the Department of Industrial Medicine.

Among the topics to be covered are: organization and administration of an industrial medical department; preventive and constructive medicine in industry; occupational diseases; toxicology and industrial hygiene for the physicians, as well as



## COMING REGIONAL MEETINGS

<u>State</u>	<u>City</u>	<u>Date</u>	<u>Governor(s)</u>	<u>Official Guest(s)</u>
North Dakota	Fargo	September 6, 1958	R. O. Goehl	Dwight L. Wilbur, President
Michigan	Traverse City	September 19-20, 1958	H. Marvin Pollard	E. R. Loveland, Exec. Sec.
Idaho-Utah	Sun Valley, Idaho	September 27, 1958	Richard P. Howard T. C. Bauerlein	Chester S. Keefer, Regent
Midwest (Ill., Ind., Iowa, Minn., Wis.)	Milwaukee, Wis.	September 27, 1958	F. W. Madison	
Western New York	Syracuse	October 3, 1958	John H. Talbott	
Southeastern (Ala., Fla., Ga., Miss., S. C., Cuba)	Biloxi, Miss.	October 3-4, 1958	D. O. Wright	
Montana-Wyoming	Casper, Wyo.	October 10-11, 1958	Wayne Gordon	
Arizona	Phoenix	October 18, 1958	William R. Hewitt	
Arkansas-Oklahoma	Hot Springs, Ark.	October 18, 1958	John N. Compton	Dwight L. Wilbur, President
Kentucky-Tennessee	Louisville, Ky.	October 18, 1958	Sam A. Overstreet Rudolph H. Kampmeier	Charles A. Doan, 1st Vice Pres.
Eastern Canada and New England States (Quebec, Newfoundland, Nova Scotia, New Brunswick, Ontario, Conn., Maine, N. H., Mass., R. I., Vt.)	Quebec, P.Q.	November 7-8, 1958	Walter deM. Scriven	Dwight L. Wilbur, President E. R. Loveland, Exec. Sec.
New Jersey	Newark	November 12, 1958	Edward C. Klein, Jr.	Dwight L. Wilbur, President
North Carolina	Winston-Salem	December 4, 1958	Elbert L. Persons	

biostatistics and epidemiology. Conference and library facilities of the Medical Center will be available to registrants. Tuition for the course is \$300. For further information, write: Associate Dean, New York University Post-Graduate Medical School, 550 First Ave., New York 16, N. Y.

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#### GAIRDNER FOUNDATION—INTERNATIONAL AWARDS

The Gairdner Charitable Foundation was incorporated in December, 1957, as a charitable corporation under the laws of the Province of Ontario of the Dominion of Canada. Its funds derive from the personal gifts of Mr. J. A. Gairdner, a Canadian industrialist and financier, and members of his family.

In addition to encouraging and rewarding individuals who have made major contributions to the conquest of disease and the relief of human suffering, the Foundation hopes that these international awards will assist in focusing public, professional and scientific attention upon two of the most important medical problems facing our modern civilization, and will contribute to improved communication of ideas among leading professional and scientific workers in these fields.

The Gairdner Charitable Foundation announces the establishment of international awards in two classes:

1. Gairdner Foundation Award of Merit. A prize of \$25,000 to be awarded not more than once in every four years to the individual or group of individuals who in the opinion of the Foundation has made the most outstanding discovery or contribution in the fields of the arthritic, rheumatic and cardiovascular diseases.
2. Gairdner Foundation Annual Awards. A series of prizes of \$5,000 each to be awarded in any one year to not more than five individuals who in the opinion of the Foundation have made outstanding discoveries or contributions in the same field.

The awards are prizes for achievement and are not grants for the support of future research.

#### *Conditions and Purposes*

All awards will be made solely in the discretion of the Foundation and will not be open to application on the part of potential candidates.

The purpose of these awards is to confer signal and substantial recognition upon those individuals whose recent work or discoveries constitute tangible achievement in the fields of the arthritic, rheumatic and cardiovascular diseases. Winners will be free to make personal use of their prizes in any manner of their choice.

Awards may be made to residents of any country without restriction as to nationality and will be payable in Canadian funds. The amount of the awards may be increased appropriately as a result of traveling expenses in certain instances.

The first awards will be made during 1958. The address of the Foundation is: 320 Bay Street, Toronto, Ont., Canada.

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#### RESEARCH TRAINING IN PSYCHIATRY

The State University of New York, the Downstate Medical Center, recently announced a program for training research specialists in psychiatry for the degree of doctor of medical science. Candidates must have completed three years of residency training in psychiatry. Stipends will be \$7,500 during the first year and \$8,000 during the second. For information, write State University of New York College of Medicine, 450 Clarkson Ave., Brooklyn, N. Y.

## AMERICAN HEART ASSOCIATION OFFERS RESEARCH SUPPORT

Applications by research investigators for support of studies to be developed during the fiscal year beginning July 1, 1959, are now being accepted by the American Heart Association. The deadline for Research Fellowship applications and Established Investigatorships is September 15, 1958. Applications for Grants-in-Aid must be made by November 1, 1958. Almost \$31,500,000 has been allocated for research support by the Association and its state and local affiliates and chapters in the past ten years.

Applications may be made for awards in the following categories:

*Established Investigatorships:* Awarded for periods of up to five years, subject to annual review, in amounts ranging from \$6,500 to \$8,500 yearly, plus dependency allowance, to scientists of proven ability who have developed in their research careers to the point where they are independent investigators. In addition, a grant of \$500 is made to the investigator's department to assist in defraying the expenses of his research program.

*Advanced Research Fellowships:* Awarded for periods of one or two years to postdoctoral applicants who have had some research training and experience, but who are not clearly qualified to conduct their own independent research. During the second year of tenure they will be permitted to spend up to 25 per cent of their time in professional and scientific activities not strictly of a research nature, provided that these will contribute to their professional development and do not involve services for a fee. These stipends range from \$4,600 to \$6,500 annually. Additionally, a grant of \$500 is made to the investigator's department.

*Research Fellowships:* A limited number of awards is available to young men and women with doctoral degrees for periods of one or two years to enable them to train as investigators under experienced supervision. Annual stipends range from \$3,800 to \$5,700. However, this type of award is primarily made by local Heart Associations.

*Grants-in-Aid:* Made to experienced investigators to help underwrite the costs of specified projects, such as expenses for equipment, technical assistance and supplies.

Further information may be obtained from the Assistant Medical Director for Research, American Heart Association, 44 E. 23rd St., New York 10, N. Y.

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PREDOCTORAL, POSTDOCTORAL FELLOWSHIPS AND SENIOR INVESTIGATOR AWARDS AVAILABLE

The Arthritis and Rheumatism Foundation offers predoctoral, postdoctoral and senior investigatorship awards in the fundamental sciences related to arthritis for work beginning July 1, 1959. Deadline for applications is October 31, 1958. These awards are intended as fellowships to advance the training of young men and women of promise for an investigative or teaching career. They are not in the nature of a grant-in-aid in support of a research project.

The program provides for three awards: (1) Predoctoral Fellowships are limited to students who hold a bachelor's degree. Each applicant studying for an advanced degree must be acceptable to the individual under whom the work will be done. These Fellowships are tenable for one year, with prospect of renewal. Stipends range from \$1,500 to \$3,000 per year, depending upon the family responsibilities of the Fellow. (2) Postdoctoral Fellowships are limited to applicants with the degree of Doctor of Medicine, Doctor of Philosophy—or their equivalent. These Fellowships are tenable for one year, with prospect of renewal. Stipends range from \$4,000 to \$6,000 per year, depending upon the family responsibilities of the Fellow. (3) Senior Investigator Awards are made to candidates holding or eligible for a "faculty

rank" such as Instructor or Assistant Professor (or equivalent) and who are sponsored by their institution. Stipends are from \$6,000 to \$7,500 per year and are tenable for five years.

A sum of \$500 will be paid to cover the laboratory expenses of each postdoctoral fellow and senior investigator. An equal sum will be paid to cover the tuition expenses of each predoctoral fellow.

For further information write the Medical Director, Arthritis and Rheumatism Foundation, 10 Columbus Circle, New York 19, N. Y.

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#### THE GERONTOLOGICAL SOCIETY MEETING

The Gerontological Society will hold its 11th Annual Scientific Meeting in Philadelphia, Pa., November 6-8, 1958. Scientific and commercial exhibits will be scheduled, together with a series of scientific meetings and social functions. For information, write to Dr. Leo Gitman, 813 Howard Ave., Brooklyn 12, N. Y.

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#### ANNUAL MEETING OF THE ACADEMY OF PSYCHOSOMATIC MEDICINE

The 5th Annual Meeting of The Academy of Psychosomatic Medicine will be held October 9-11, 1958, at the Park Sheraton Hotel in New York City. The program will be devoted to "The Psychosomatic Aspects of Internal Medicine" and will include formal papers, panel discussions and luncheon conferences. The meeting will be open to all scientific disciplines, as well as psychologists, social workers and nurses. Information may be obtained from Dr. Bertram B. Moss, Suite 1035, 55 E. Washington St., Chicago 2, Ill.

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#### FELLOWSHIP IN NUTRITION

Candidates with doctorate degrees in medicine who are interested in training in nutrition are invited to apply for the Russell M. Wilder Fellowship sponsored by the National Vitamin Foundation. The fellowship is for three years and the stipend is \$4,500 for the first year, \$5,000 for the second, and \$5,500 for the third year. The Fellowship begins in July or September 1959. It has been created in honor of Dr. Russell M. Wilder, M.A.C.P., Emeritus Staff Member of the Mayo Clinic, Rochester, Minn. Applications or information may be secured at the office of the National Vitamin Foundation, 149 E. 78th St., New York 21, N. Y.

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#### COURSE IN CLINICAL USE OF RADIOACTIVE ISOTOPES

A course in "The Clinical Use of Radioactive Isotopes" will be given by Dr. I. F. Hummon and associates at the Cook County Hospital, Chicago, Ill., September 29-October 10, 1958. This is a full-time course including lectures, demonstrations, laboratory periods, and clinics. Lecture subjects will include "Radiation Physics," "Radiation Hazards and Protection," "Natural and Artificial Radioactivity," "Theory of Measurement," and "Counters and Statistics." Clinical subjects will include the preparation, administration and uptake of tracer materials, thyroid physiology, thyroid neoplasms, blood dyscrasias, blood volume studies, and other uses of Iodine-131, Phosphorus-32, and Au-198. Atomic Energy Commission requirements and the obtaining of radioactive isotopes will be discussed.

The course will be offered for a minimum of eight and a maximum of fifteen students; the fee for the course is \$200. Inquiries may be addressed to the Registrar, Cook County Graduate School of Medicine, 707 S. Wood St., Chicago 12, Ill.

### CONNECTICUT SEMINAR IN PSYCHIATRY AND NEUROLOGY

The 12th Connecticut Postgraduate Seminar in Psychiatry and Neurology will be held in New Haven, Conn., starting September 18 and continuing through April 15, 1959. All lectures will be presented in the late afternoon or early evening. The course is sponsored by the Yale University School of Medicine and is available without fee payment. For information write the Office of the Assistant Dean of Postgraduate Medical Education, Yale University School of Medicine, 333 Cedar St., New Haven, Conn.

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### ARMED FORCES PLAN FOR RESIDENCY DEFERMENT

In a bulletin dated May 1, 1958, the Department of Defense, Office of the Assistant Secretary of Defense (Health and Medical Division), outlined the program for commissioning and deferring physicians in the Armed Forces Reserve Medical Program. The plan was developed by the Selective Service System and Department of Defense to permit physicians who are liable for military service to be commissioned well in advance of the time they are to serve, and to permit successful applicants to be deferred for residency training in specialties required by the Armed Forces. The main purposes of the program are to enable the Army, Navy, and Air Force to obtain, from among those obligated for military service, the required number of physicians with specialty training; to permit draft-liable physicians to apply for and receive Reserve commissions while still in internship; thus, those physicians who desire, may enter active duty following completion of internship; to permit draft-liable physicians to express a choice of service in which to be commissioned, and to indicate the date they would prefer to enter on active duty. Their wishes will be followed insofar as the requirements of the military departments permit. A participant must be a 1958 graduate of a medical school approved by the Council on Medical Education and Hospitals of the American Medical Association; be liable for two years of military service and be qualified for, and willing to accept, a Reserve commission in the Army, Navy, or Air Force.

All participants will be required to complete and return the application for commission by December 1, 1958. The number of selections for recommendation for deferment in the following specialties will be: 109 in Internal Medicine; 18 in Neurology; 9 in Occupational Medicine; 49 in Pathology; 67 in Pediatrics; 4 in Physical Medicine and Rehabilitation; 27 in Preventive Medicine and Public Health; 109 in Psychiatry, and 32 in Radiology. For information write to the Department of Defense, Office of the Assistant Secretary of Defense (Health and Medical), Washington 25, D. C.

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### INTERNATIONAL CONGRESS OF THE NEUTRALITY OF MEDICINE IN TIME OF WAR

An International Congress of the Neutrality of Medicine in Time of War was held in Paris, France, June 5-7, 1958. Information concerning the proceedings are available through Professor Charles Richet of the University of Paris School of Medicine.

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### Personal Notes

Dr. Robert A. Jordan, F.A.C.P., who has served as Assistant Professor of Medicine and Director of the Out Patient Department at the University Hospital in Kansas City, Kans., is moving to Tulsa, Okla., to be associated with the Springer Clinic, 604 S. Cincinnati, in that city.



Dr. Roland A. Davison, F.A.C.P., San Francisco, Calif., recently accepted an appointment as Visiting Clinical Professor of Medicine to the Faculty of Medicine, University of Indonesia, Djakarta, Indonesia.

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Dr. Sidney Davidson, F.A.C.P., Lake Worth, Fla., has been elected President of the Florida Heart Association.

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Dr. C. Wesley Eisele, F.A.C.P., Denver, Colo., addressed the Nevada Chapter of The American Academy of General Practice at Las Vegas, Nev., on May 23-24, 1958.

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A Testimonial Dinner was given at the Barton Hills Country Club, Ann Arbor, Mich., on June 10, 1958, to honor five members of the Medical School Faculty of the University of Michigan who, on June 30, either began or completed their retirement furloughs. Two of these faculty members were Dr. Cyrus C. Sturgis, former President of the American College of Physicians, and Dr. Ruth C. Wanstrom, F.A.C.P.

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Dr. John B. Hickam, F.A.C.P., Durham, N. C., has been appointed Chairman of the Department of Medicine at the Indiana University School of Medicine, Indianapolis, Ind. He succeeds Dr. James O. Ritchey, F.A.C.P., who resigned from the position, although retaining his teaching and committee duties.

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Dr. Thomas Parran, F.A.C.P., Pittsburgh, Pa., former Dean of the Graduate School of Public Health, University of Pittsburgh, has been named Director of the Avalon Foundation, New York, N. Y. Dr. Parran was formerly the Surgeon General, U. S. Public Health Service.

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Dr. Jean A. Curran, Sr., F.A.C.P., Brooklyn, N. Y., has been named a Trustee and Consultant for the Bingham Associates Fund of Bethel, Maine, located at the New England Center Hospital in Boston, Mass. Dr. Curran was formerly Associate Executive Dean for Medical Education of the State University of New York College of Medicine, New York, N. Y., and continues there as a Professor of History of Medicine.

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Dr. Edgar G. Givhan, Jr., F.A.C.P., Birmingham, Ala., was installed as President of the Medical Association of The State of Alabama at the recent annual meeting of the organization.

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Dr. Joseph F. Ross, F.A.C.P., Los Angeles, Calif., and Dr. Ralph O. Wallerstein, (Associate), San Francisco, Calif., were speakers at the Symposium on Hematology which was held May 17, 1958, to celebrate the opening of the new research facilities of the Palo Alto Medical Research Foundation. Their subjects were: "Blood, Iron and Isotopes," and "Bone Marrow Hemosiderin," respectively.

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Dr. John B. Youmans, F.A.C.P., who is resigning as Dean of Vanderbilt University Medical School, Nashville, Tenn., has been appointed Technical Director of Research in the Office of the Army Surgeon General, in Washington, D. C., and will

assume his new duties on a full-time basis September 1, 1958. In his new position, Dr. Youmans will provide technical guidance in the making and executing of a balanced research and development program in medical, dental, veterinary and allied sciences designed to meet the present and future needs of the Army. He will serve as principal advisor on all scientific and technical matters concerning research and development to The Surgeon General of the Army and to the Chief of the Research and Development Division in The Surgeon General's Office.

Dr. Youmans is now serving as Consultant to the Army Surgeon General's Preventive Medicine Division, as Consultant to the Interdepartmental Committee on Nutrition for National Defense; Member, Assistant Secretary of Defense Panel on Military Medicine; and as a Member, National Research Council Committee for the Quartermaster Subcommittee on Nutrition. A retired Army Medical Corps Colonel, Dr. Youmans served in China, the Pacific and the European Theaters in World War II, and was awarded the Legion of Merit and the French Legion of Honor. During World War II he was also in charge of the Nutrition Division in the Army Surgeon General's Office.

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Dr. Robert M. Farrier, (Associate), Bethesda, Md., was recently appointed Assistant Director of the National Institutes of Health Clinical Center at Bethesda, Md.

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Dr. Sol Sherry, (Associate), St. Louis, Mo., was named recently as Professor of Medicine at the Washington University School of Medicine, St. Louis, Mo.

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Among the 11 out-of-state speakers at the Oklahoma State Medical Society Meeting held at Oklahoma City, Okla., May 5-7, 1958, were three Fellows of the College. They were: Drs. J. A. Barga, Rochester, Minn.; Charles H. Brown, Cleveland, Ohio, and Louis A. Soloff, Philadelphia, Pa.

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Drs. Cyril M. MacBryde, F.A.C.P., St. Louis, Mo.; George C. Griffith, F.A.C.P., Los Angeles, Calif., and William R. Arrowsmith, (Associate), New Orleans, La., served as speakers at the 67th Annual Meeting of the Arizona Medical Association held at Chandler, Ariz., April 30-May 2, 1958.

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Three Baltimore members of the College were elected officers of the Medical and Chirurgical Faculty of the State of Maryland at the recent annual meeting of the organization. Elected were: Drs. Samuel Morrison, F.A.C.P., Vice President; William C. Ebeling, (Associate), Secretary, and Wetherbee Fort, F.A.C.P., Treasurer. They will assume office at the next annual meeting which will be held in April, 1959.

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Dr. Hugh H. Hussey, Jr., F.A.C.P., former Director of the Department of Medicine of the Georgetown University School of Medicine, Washington, D. C., has been appointed Dean of the Medical School and assumed his new duties on July 1, 1958. Dr. Hussey is Associate Editor of *Medical Annals of the District of Columbia*. He was Chief of the Georgetown Division at the District of Columbia General Hospital for 16 years.

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Dr. Thomas Findley, F.A.C.P., Augusta, Ga., was a guest speaker at the 76th Annual Meeting of the New Mexico Medical Society at Albuquerque, N. M. He

spoke on the subject, "Peripheral Vascular Diseases," and moderated a panel which discussed "Management of the Geriatric Patient."

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Dr. William J. Cranston, F.A.C.P., Augusta, Ga., has been named Professor Emeritus of the Medical College of Georgia by special action of the Board of Regents. Dr. Cranston had been a member of the faculty of the College since 1915.

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Dr. Howard A. Rusk, F.A.C.P., New York, N. Y., recently received a bronze plaque from the Association for the Help of Retarded Children "for his services to the mentally retarded."

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Dr. Timothy R. Talbot, Jr., (Associate), Philadelphia, Pa., was recently named Director of the Institute for Cancer Research at the Lankenau Hospital. He will succeed Dr. Stanley P. Reimann, F.A.C.P., who will continue as Director Emeritus.

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Dr. Paul Gyorgy, F.A.C.P., Professor of Nutrition and Pediatrics, University of Pennsylvania School of Medicine, was recently awarded the Osborne and Mendel Award by the Nutrition Foundation.

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Dr. William E. R. Greer, F.A.C.P., Boston, Mass., presented a paper on "When Should Heart Disease Be Compensable," at the Annual Meeting of the Rhode Island Medical Society, Providence, R. I., May 13-14, 1958.

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Dr. Howard F. Root, F.A.C.P., Boston, Mass., discussed "Oral Preparation for the Treatment of Diabetes," and Dr. Burrill B. Crohn, F.A.C.P., New York, N.Y., reviewed "The Life and Work of William Beaumont," at the 117th Annual Meeting of the State Medical Society of Wisconsin at Milwaukee, Wis., May 6-8, 1958.

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Drs. Edgar V. Allen, F.A.C.P., and Robert L. Parker, F.A.C.P., both of Rochester, Minn., discussed the subject, "Cardiovascular Disease," at the Medical Section of the American Life Convention held at Colorado Springs, Colo., June 9-11, 1958. The association is comprised of legal reserve life insurance companies of the United States and Canada.

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Major Gen. Otis O. Benson, Jr., F.A.C.P., U.S.A.F., (MC), Commandant of the School of Aviation Medicine, San Antonio, Tex., is serving as Co-Chairman of the Space Symposium sponsored by the School which will be held November 10-12, 1958, at the Hilton Hotel in San Antonio, Tex. The program will bring together specialists in all aspects of space exploration. The proceedings will be published at a later date.

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Drs. Leo H. Bartemeier, F.A.C.P., Medical Director, Seton Institute, Baltimore, Md., and John Z. Bowers, F.A.C.P., Dean, University of Wisconsin School of Medicine, Madison, Wis., have been appointed members of the National Advisory Committee to Selective Service on the Selection of Physicians, Dentists, and Allied Specialists, by President Dwight D. Eisenhower.

Dr. James F. Weir, F.A.C.P., Rochester, Minn., retired in April, 1958, after 38 years of service as a member of the staff of the Mayo Clinic. In 1952, he was appointed Chairman of two sections of internal medicine particularly concerned with gastroenterologic problems and in 1955 of the four sections of this specialty.

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Dr. Esmond R. Long, M.A.C.P., Pedlar Mills, Va., Emeritus Professor of Pathology, Henry Phipps Institute, University of Pennsylvania, Philadelphia, presented a lecture on the subject, "Historical Facts about Morgagni, Rokitanski and Virchow, Pathologists," at the final in the second series of ten lectures on the History of Surgery and Related Sciences at the International College of Surgeons Hall of Fame, Chicago, Ill., May 13, 1958.

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Dr. Eugene A. Stead, Jr., F.A.C.P., Durham, N.C., discussed the subject, "Reversible Renal Disease," and Dr. E. Arthur Dreskin, (Associate), Greenville, S. C., conducted a clinical conference at the 110th Annual Session of the South Carolina Medical Association at Myrtle Beach, S.C., May 13-15, 1958.

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Three members of the College from Huntington, W. Va., participated in the program of the West Virginia State Society of Medical Technologists held in Huntington, May 23-24, 1958. Dr. Jack H. Baur, (Associate), discussed "The Abnormal Hemoglobins," Dr. Frank C. Hodges, F.A.C.P., "Recent Concepts Related to Blood Cholesterol," and Dr. S. Werthammer, F.A.C.P., "Forensic Medicine and the Medical Technologist."

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The alumni of the University of Pittsburgh School of Medicine have launched a campaign to raise a half-million dollars to endow a chair of biochemistry in honor of William S. McEllroy, F.A.C.P., who retired as Dean of the University of Pittsburgh School of Medicine on June 30, 1958.

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The 2nd Annual Rowntree Lecture at the University of Miami School of Medicine, Coral Gables, Fla., was presented by Dr. Robert M. Kark, F.A.C.P., Professor of Medicine, University of Illinois College of Medicine, Chicago, Ill., on May 23, 1958. His subject was "Richard Bright and Bright's Disease."

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A newly-created Samuel J. Hoffman Research Fellowship at the Hektoen Institute for Medical Research of the Cook County Hospital, Chicago, Ill., was announced by a group of doctors and civic leaders on May 17, 1958. The occasion was a dinner honoring Dr. Samuel J. Hoffman, F.A.C.P., Executive Director of the Institute.

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Dr. William B. Wood, Jr., F.A.C.P., Baltimore, Md., presented the Shattuck Lecture on the "Role of Endogenous Pyrogen in the Genesis of Fever," at the 177th Anniversary of the Massachusetts Medical Society held in Boston, Mass., May 20-22, 1958.

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Rear Admiral Edward C. Kenney, F.A.C.P., (MC), U.S.N., received an honorary degree of Doctor of Science at the commencement exercises of the Denison University, Granville, Ohio, June 9, 1958. Admiral Kenney was a student at Denison from

1923-26 and received his Bachelor of Science Degree there before entering the University of Cincinnati College of Medicine to study medicine. He is presently on duty in the Bureau of Medicine and Surgery as Assistant Chief for Personnel and Professional Operations in Washington, D. C.

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Dr. John J. Sampson, F.A.C.P., San Francisco, Calif., moderated a Clinical Cardiac Conference at the 24th Annual Meeting of the American College of Chest Physicians at San Francisco, June 18-22, 1958.

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Dr. Felix J. Underwood, F.A.C.P., Executive Officer and Secretary of the Mississippi State Board of Health, Jackson, Miss., was honored at a special dinner sponsored by public health workers of the State of Mississippi held at Jackson, Miss., June 23, 1958. Dr. Underwood retired on June 30, 1958.

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Dr. Robert B. Howard, (Associate), Associate Dean of the University of Minnesota Medical School, Minneapolis, Minn., recently announced plans for increased enrollment. Due to enlarged laboratory facilities and the strengthening of the staffs of the university's basic medical sciences departments, it is planned to increase student enrollment from 125 to 140 during the year 1958-59 and to 150 in 1959.

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Dr. Walter L. Bierring, M.A.C.P., Des Moines, Iowa, recently returned from a trip to the Middle East where he attended the 8th Middle East Medical Assembly arranged by the American University of Beirut, held May 9-11, 1958. Because political demonstrations became violent, it was found necessary to cancel the banquet and ceremonies were conducted in the University Alumni Club. Dr. Bierring received the Lebanese Order of Cedars with the rank of Commander, from His Excellency, the Minister of Health of Lebanon, Dr. Albert Meekharbar. Dr. Bierring celebrated his 90th birthday on July 15, 1958.

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Dr. William B. Bean, F.A.C.P., Iowa City, Iowa, presented a paper entitled "Gastrointestinal Bleeding in Some Rare Diseases with Pathognomonic Skin Lesions," at the World Congress of Gastroenterology in Washington, D. C., May 28, 1958. He was recently appointed Governor for the State of Iowa of the American College of Chest Physicians.

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Dr. Louis F. Bishop, F.A.C.P., New York, N. Y., was elected President of the American College of Sports Medicine at the Fifth Annual Meeting of the College held recently in Kansas City, Mo.

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Colonel Weldon J. Walker, F.A.C.P., Consultant in Cardiology to the U. S. Army Europe, and Chief of Medical Service at the U. S. Army Hospital, Frankfurt, Germany, was a guest speaker at the 8th Middle East Medical Assembly held at the American University of Beirut, Lebanon, May 9-11, 1958. He presented papers entitled "Newer Concepts Concerning the Cause and Prevention of Hypertension," and "The Lipid Problem in Atherosclerosis."

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Dr. Anthony F. Perl, F.A.C.P., Sarnia, Ontario, Can., was elected recently as the Vice President of the Ontario Association of Medical Clinics, at the annual meeting of that organization.



Dr. Alfred S. Dooneief, F.A.C.P., Mount Kisco, N. Y., was named President-Elect of the New York Trudeau Society at a recent meeting of the organization.

Dr. Barnett Greenhouse, F.A.C.P., New Haven, Conn., participated in a series of medical programs during April and May. These included lectures on "Diabetes Education," at the University of Miami, Coral Gables, Fla., a discussion of the "Oral Hypoglycemic Compounds Now in Use and Under Clinical Evaluation," presented at the Clinical Session of the Phi Lambda Kappa Fraternity at Miami Beach, Fla., April 13-20, 1958, and a review of the "Recent Advances in the Treatment of Diabetes," at the Postgraduate Pharmacy Clinic held at the University of Connecticut, Storrs, Conn., May 7, 1958.

Dr. Jerome G. Kaufman, F.A.C.P., Newark, N. J., was recently elected a member of the Board of Trustees of the Medical Society of New Jersey.

Major General Harry G. Armstrong, F.A.C.P., U.S.A.F., (MC) recently received the Legion of Merit Award with Second Oak Leaf Cluster for "exceptionally meritorious conduct in the performance of outstanding service to the United States as Surgeon of the United States Air Forces in Europe from July 3, 1954 to November 20, 1957." The presentation was made by Major General Dan C. Ogle, F.A.C.P., Air Force Surgeon General, Washington, D. C.

Dr. Leroy E. Burney, F.A.C.P., Surgeon General, U. S. Public Health Service, Washington, D. C., discussed the subject "Mutual Problems of Medical Practice and Public Health," and Dr. Leo H. Bartemeier, F.A.C.P., Baltimore, Md., was an out-of-state speaker at the 82nd Annual Session of the Arkansas Medical Society held May 5-7, 1958, at Hot Springs, Ark.

Dr. George T. Harrell, Jr., F.A.C.P., Gainesville, Fla., and Dr. Robert W. Wilkins, F.A.C.P., Boston, Mass., were out-of-state speakers at the 104th Annual Session of the Medical Association of Georgia held April 27-30, 1958, at Macon, Ga.

Dr. J. Warrick Thomas, F.A.C.P., Richmond, Va., presented a paper on the subject, "Respiratory Allergy and Superimposed Infections," at the Annual Meeting of the Iowa State Medical Society held in Des Moines, Iowa, April 20-23, 1958.

Four Fellows of the College were speakers on the program of the 8th Annual Scientific Assembly of the Virginia Academy of General Practice held at Virginia Beach, Va., May 8-11, 1958. The doctors and subjects were as follows: Franklin B. Peck, Sr., Indianapolis, Ind., "Insulins in the Treatment of Diabetes"; Edward F. Bland, Boston, Mass., "Rheumatic Fever, Then and Now—A 30-Year Perspective"; Henry H. Dixon, Portland, Ore., "Methods in the Treatment of the Anxiety Tension Patterns," and Joseph F. Hughes, Philadelphia, Pa., "Emotional Problems of Children."

Three Fellows of the College participated in the program of the 105th Annual Meeting of the Minnesota State Medical Association held in Minneapolis, Minn., May 22-24, 1958. Dr. H. B. Sweetser, Jr., Minneapolis, Minn., presented the presidential address; Dr. Leroy E. Burney, Surgeon General, U. S. Public Health Service,

conducted a discussion, and Dr. William C. Menninger, Topeka, Kans., spoke on the subject, "Physicians' Feelings."

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Dr. John W. Frost, F.A.C.P., Philadelphia, Pa., discussed "Hemologic Aspects of Bleeding Factors Relating to Obstetrical and Gynecological Patients," and Dr. L. Maxwell Lockie, Sr., F.A.C.P., Buffalo, N. Y., reviewed the subject, "Rehabilitation of Rheumatoid Arthritis of the Foot," at the 192nd Annual Meeting of the Medical Society of New Jersey held at Atlantic City, May 17-21, 1958.

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Three Fellows of the College appeared on the scientific program of the 6th Annual Scientific Assembly of the West Virginia Chapter of the American Academy of General Practice held at Charleston, W. Va., May 24-25, 1958. Dr. Edward C. Kunkle, Durham, N. C., discussed "Problems in the Management of Vascular Headache"; Dr. Walter L. Palmer, Chicago, Ill., discussed the subject, "Pulmonary Embolism," and Dr. R. Emmet Kelly, St. Louis, Mo., presented a paper on "The Cardiac in Industry."

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Dr. Alan L. Frankel, (Associate), Albuquerque, N. M., who is the President-Elect of the New Mexico Heart Association, presided at the 4th Annual Scientific Session sponsored by that organization on May 17, 1958. Appearing on the program were Dr. Hans Hecht, F.A.C.P., Salt Lake City, Utah; Conger Williams, (Associate), Milton, Mass., and Dr. Samuel Bellet, F.A.C.P., Philadelphia, Pa.

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Dr. John C. Leonard, F.A.C.P., A.C.P. Governor for Connecticut, presented a paper on "Hypertension—a 22-Year Follow-Up," on May 4, 1958, during the American College of Physicians Bermuda Symposium which followed the Annual Session of the College. He was recently elected Chairman of the American Medical Association's Committee on Postgraduate Medicine.

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Dr. John R. Paul, F.A.C.P., New Haven, Conn., was recently named to the Poliomyelitis Hall of Fame.

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Dr. M. J. Romansky, F.A.C.P., Washington, D. C., presented the Annual Julius A. Koch Memorial Lecture at the University of Pittsburgh School of Pharmacy, Pittsburgh, Pa., April 30, 1958. His subject was "Current Trends in the Use and Abuse of the Antibiotics."

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Dr. Mayer A. Green, F.A.C.P., Pittsburgh, Pa., spoke on the subject, "Specific Hyposensitization Therapy in Allergy," at the 14th Annual Postgraduate Course in Allergy sponsored by the American College of Allergists in Atlantic City, N. J., April 21-26, 1958. He also presented a paper on "Allergy in Children," at the Postgraduate Course in Clinical Medicine, sponsored by the Pennsylvania State Medical Society at Williamsport, Pa., May 14, 1958.

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A testimonial dinner honoring Dr. Edward C. Reifenstein, Sr., F.A.C.P., Syracuse, N. Y., was sponsored by the physicians who trained under him. It was held at Syracuse, N. Y., May 8, 1958. Four other physician members of the Reifenstein family were in attendance. They included Drs. Benedict W. Reifenstein, F.A.C.P., Syracuse, N. Y., a brother; and three sons, Edward C. Reifenstein, Jr., F.A.C.P.,

New York City, George H. Reifstein, F.A.C.P., San Francisco, Calif., and Robert W. Reifstein, Syracuse, N. Y.

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Dr. Thomas F. Frawley, F.A.C.P., Associate Professor of Medicine and Head of the Sub-Department of Endocrinology and Metabolic Diseases at the Albany Medical College of Union University, Albany, N. Y., served as Visiting Professor of Medicine at the University of Buffalo School of Medicine during the week of April 14, 1958.

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Dr. Edward E. Holloway, F.A.C.P., Clinical Professor of Medicine, Woman's Medical College of Pennsylvania, Philadelphia, Pa., discussed the subjects, "Diagnosis and Management of Congestive Heart Failure," and "Diagnosis and Management of Diabetes Mellitus," at the Annual Meeting of the Louisiana State Medical Society at Lake Charles, La., May 14-15, 1958.

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Dr. Robert H. Bayley, F.A.C.P., Professor of Medicine at the University of Oklahoma School of Medicine, Oklahoma City, Okla., was recently awarded an honorary fellowship in the American College of Cardiology at the meeting of the organization in Oklahoma City, Okla.

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Dr. Jerome W. Conn, F.A.C.P., Professor of Medicine and Director of the Metabolism and Research Unit of the University of Michigan Medical School, presented the Banting Memorial Lecture at the 18th Annual Meeting of the American Diabetes Association at San Francisco, Calif., June 21, 1958. The title of the lecture was "The Pre-Diabetic State in Man: Definition, Interpretation and Implications." Dr. John A. Reed, F.A.C.P., Washington, D. C., presided at the meeting as President of the Association.

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Three Fellows of the College were speakers on the program of the 118th Annual Meeting of the Illinois State Medical Society held in Chicago, Ill., May 20-23, 1958. Dr. Alexander Marble, Boston, Mass., presented the Annual Address in Medicine on the subject, "The Place of Oral Hypoglycemic Agents in the Management of Diabetes." Drs. Nelson W. Barker, Rochester, Minn., and Anthony C. Cipollaro, New York, N. Y., were out-of-state participants in the general sessions.

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Dr. William B. Walsh, (Associate), Washington, D. C., was appointed recently by President Dwight D. Eisenhower to serve on the Selective Service Board on the Selection of Physicians, Dentists and Allied Specialists.

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Dr. Samuel Waldman, F.A.C.P., Brooklyn, N. Y., was one of nine physicians from throughout the United States to win a 17-day all expense Caribbean vacation for two in a recent contest sponsored by the United Fruit Company. The subject of the contest was "the most gratifying discovery you have made about the clinical use of bananas."

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Seven Fellows of the College were elected to offices during the recent meeting of the American Gastroenterological Association in Washington, D. C. Included were: Drs. Clifford J. Barborka, Chicago, Ill., President; H. Marvin Pollard, Ann Arbor, Mich., President-Elect; Hugh R. Butt, Rochester, Minn., Vice President; G. Gordon

McHardy, New Orleans, La., Treasurer; Franz J. Ingelfinger, Boston, Mass., Secretary; and Charles A. Flood, New York, N. Y., and Julian M. Ruffin, Durham, N. C., Council Members.

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Dr. Kurt Lange, F.A.C.P., Associate Professor of Internal Medicine and Associate Professor of Pediatrics (Research), New York Medical College—Flower and Fifth Avenue Hospitals, New York, N. Y., was invited by the Medical Society of Frankfurt am Main, Germany, to present a paper entitled "The Prolonged Intermittent Steroid Treatment of Nephrosis," there on July 16, 1958. He also discussed "Immunologic Background of Glomerulonephritis and Nephrosis," before the Society for Medicine and Physics at Wuerzburg, Germany, and addressed the Medical Faculty of Wuerzburg University on the subject, "The Aid of the Fluorescein Method in Diagnosing Peripheral Vascular Diseases," on July 17 and 21, respectively.

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Dr. William S. Middleton, M.A.C.P., former President of the College, and Chief Medical Director of the Veterans Administration in Washington, D. C., was given an honorary Doctor of Letters Degree at Marquette University's commencement exercises on June 8, 1958, in Milwaukee, Wis. Dr. Middleton, a native of Norristown, Pa., is a former Professor of Medicine and Dean of the University of Wisconsin Medical School.

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Two Fellows of the College who are members of the faculty of the University of Oregon Medical School, Portland, Ore., were named recently as officers of medical societies. Dr. Merle W. Moore, Associate Clinical Professor of Medicine and Head of the Division of Allergy, was elected President of the American College of Allergists at the 14th Annual Meeting of the organization in Atlantic City, N. J. Dr. Edwin E. Osgood, Professor and Head of the Division of Experimental Medicine, was named Vice President of the American Society of Hematology at a meeting of the society in Atlantic City, N. J.

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Dr. Daniel H. Labby, F.A.C.P., Head of the Division of Diabetes and Metabolism, University of Oregon Medical School, Portland, Ore., served as Visiting Professor of Medicine at the University of Colorado School of Medicine, Denver, Colo., March 24-27, 1958. On March 24, he was also guest lecturer at the Rocky Mountain Gastroenterology Association meeting at Denver.

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Dr. M. Coleman Harris, F.A.C.P., San Francisco, Calif., was elected Secretary of the American College of Allergists at the Annual Meeting held in Atlantic City, N. J., April 20-25, 1958. He also read a paper on "The Possible Influence of Serotonin in Allergic Disease."

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At the recent dinner sponsored by the New York Allergy Society honoring Dr. Robert A. Cooke, M.A.C.P., New York, N. Y., the Chairman planning the occasion was Dr. Leoni N. Claman, President of the Society, and not Dr. Sheppard Siegal, F.A.C.P., New York, N. Y., who was named in an earlier report.

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Major General Silas B. Hays, F.A.C.P., Surgeon General of the Army, Washington, D. C., returned recently from an extensive inspection tour of medical units in the Pacific and Far East.



Brigadier General Thomas W. Mattingly, F.A.C.P., Chief, Department of Medicine and Chief, Cardiology Service, Walter Reed Army Hospital, Washington, D. C., received the John Carroll Alumni Award from The Georgetown University Medical School Alumni in April, 1958.

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Colonel Irvin C. Plough, F.A.C.P., spent three months in Spain recently assisting in the Nutrition Survey of the Spanish Armed Forces under the auspices of the Interdepartmental Committee for Nutrition for National Defense.

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Colonel James A. Wier, F.A.C.P., Chief, Pulmonary Disease Service, Fitzsimons Army Hospital, Denver, Colo., was elected President of the Denver Tuberculosis Association at the annual meeting held in Denver. He is also President-Elect of the Colorado Chapter of the American College of Chest Physicians.

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Dr. Willard C. Rappleye, F.A.C.P., Vice President in Charge of Medical Affairs, Columbia University, and Dean and Professor of Medical Economics, Columbia University College of Physicians and Surgeons, retired in June, 1958. He had held the position for 27 years, after becoming the Dean at 39 years of age. In addition to his extensive contribution to the field of medical education, Dr. Rappleye has been active in many other civic affairs. He served for a time as Commissioner of Hospitals in the City of New York Department of Hospitals, has been President of the Josiah Macy, Jr., Foundation since 1941, and has been a member of the Board of Hospitals, City of New York, since 1950. He has received honorary degrees from Yale University (1922), Trinity College (1939), Rutgers University (1949), and Woman's Medical College of Pennsylvania (1950).

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Dr. Lawrence E. Hinkle, (Associate), New York, N. Y., was elected a member of the Council of the American Psychosomatic Society at its annual meeting in Cincinnati, Ohio, March 29, 1958.

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Six Fellows of the College presented papers at the general sessions of the 152nd Annual Meeting of the Medical Society of the State of New York, held in New York, N. Y., May 12-16, 1958. They were: Drs. Abraham H. Aaron, Buffalo, N. Y., "Functional Disorders of the Esophagus"; Carl Muschenheim, New York, N. Y., "Advances in Antimicrobial Therapy"; Martin Perlmutter, Brooklyn, N. Y., "Secreting Tumors"; Linn J. Boyd, New York, N. Y., "Coma and Unconsciousness," and Cornelius P. Rhoads, New York, N. Y., "Present Concepts of Carcinogenesis." Dr. Charles A. Flood, New York, N. Y., gave the A. Walter Suiter Lecture on "Medical Aspects of Functional Disorders of the Esophagus."

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Drs. David A. Cooper, F.A.C.P., Philadelphia, Pa., and Howard F. Root, F.A.C.P., Boston, Mass., were out-of-state speakers at the 104th Annual Session of the Medical Society of the State of North Carolina held in Asheville, N. C., May 4-7, 1958.

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Dr. Benjamin M. Gasul, F.A.C.P., Chicago, Ill., was a guest speaker at the 77th Annual Meeting of the South Dakota State Medical Association held in Huron, S. D., May 17-20, 1958.



# OBITUARIES

The College records with sorrow the deaths of the following members. Their obituaries will appear later in these columns.

- Dr. Charles D. Ambrose, (Associate), Ligonier, Pa., March 15, 1958.
- Dr. Samuel Studdiford Cooley, F.A.C.P., Black Mountain, N. C., May 9, 1958.
- Dr. Jerome Stanley Frankel, F.A.C.P., Cleveland, Ohio, June 1, 1958.
- Dr. Leonard Henry Fredricks, F.A.C.P., Bismarck, N. D., April 27, 1958.
- Dr. Samuel James Goldberg, Sr., F.A.C.P., New Haven, Conn., April 28, 1958.
- Dr. Claude Lee Holland, F.A.C.P., Fairmont, W. Va., January 29, 1958.
- Dr. Thomas Tallman Holt, F.A.C.P., Wichita, Kans., January 18, 1958.
- Dr. Clarence Elton Hufford, F.A.C.P., Toledo, Ohio, March 25, 1958.
- Dr. Isidore Stanley Kahn, F.A.C.P., San Antonio, Tex., January 27, 1958.
- Dr. Thomas Charles Kelly, F.A.C.P., Philadelphia, Pa., April 22, 1958.
- Dr. Edgar Fayette Kiser, F.A.C.P., Indianapolis, Ind., January 22, 1958.
- Dr. Louis A. Levison, F.A.C.P., Toledo, Ohio (date unknown).
- Dr. Floyd Addison Loop, F.A.C.P., Lafayette, Ind., March 10, 1958.
- Dr. William Frederick Lorenz, F.A.C.P., Gordon, Wis., February 18, 1958.
- Dr. Louis C. Morris, (Associate), Evanston, Ill., February 23, 1958.
- Dr. Geoffrey William Rake, F.A.C.P., New York, N. Y., April 20, 1958.
- Dr. Francis Eugene Seneor, F.A.C.P., Chicago, Ill., February 11, 1958.
- Dr. Charles Hervey Smith, F.A.C.P., Uniontown, Pa., January 20, 1958.
- Dr. William Clarence Walker, F.A.C.P., Salt Lake City, Utah, February 15, 1958.
- Dr. Louis Osgood Sanborn Wallace, F.A.C.P., Manchester, N. H., May 20, 1958.
- Dr. Randall Allen Whinnery, F.A.C.P., Detroit, Mich., May 26, 1958.

## DR. CHARLES LEE ANDERSON

It is with regret that I report the death of Dr. Charles Lee Anderson, F.A.C.P., of San Jose, California.

Dr. Anderson was born in 1903 in Columbus, Georgia. He received his M.D. degree at Emory University School of Medicine in 1928, following which he interned at the City Hospital in Columbus, Georgia, in 1928-29. For his postgraduate training he went to the Johns Hopkins Hospital in Baltimore, Maryland, for the year 1929-30. He served his residency at Kings County Hospital, Brooklyn, New York, 1930-31.

He was a Clinical Assistant at the New York Hospital Association in 1932-36 and Assistant and Attending Physician at the New York Post-Graduate Hospital from 1936 to 1942. Dr. Anderson became a member of the Staff of the Community Service and O'Conner Hospitals in San Jose, California in 1947. He served in the Military Service as Lt. Col. (MC), AUS, from 1942-46.

He was a member of the American Medical Association, the Queens County Medical Society, the Medical Society of the State of New York, the Santa Clara County Medical Society, the California Medical Association, the American Heart Association, and was a Fellow of the American College of Physicians (1949).

Dr. Anderson was well-liked by his colleagues in the medical profession and enjoyed the confidence of his patients.

STACY R. METTIER, M.D., F.A.C.P.,  
Governor, Northern California and Nevada

## DR. DAVID M. BERKMAN

Dr. David M. Berkman, F.A.C.P., a member of the staff of the Mayo Clinic from 1913 to 1951, and of the Board of Governors of that institution, died of a cerebral hemorrhage at Saint Mary's Hospital in Rochester, Minnesota, on May 28, 1958.

Dr. Berkman was a member of a pioneer Rochester family. He was born in Rochester on May 26, 1886, the son of Gertrude Mayo Berkman and Dr. David Berkman. His mother was the elder sister of Dr. William J. Mayo and Dr. Charles H. Mayo, and the daughter of Dr. William W. Mayo. The father, Dr. David Berkman, was a veterinary physician who sometimes assisted Dr. W. W. Mayo and who played a conspicuous part in caring for the victims of the tornado of August 21, 1883. He was steward of the makeshift hospitals in Rochester, which the two Mayo brothers and their father set up in Rommel's dance hall, and in the lodge rooms of the German Library Association.

Dr. Berkman attended the public schools of Rochester and the University of Minnesota, Minneapolis, Minnesota, from which he received the degree of Bachelor of Science in 1909. He then continued his education at Rush Medical College, receiving the degree of Doctor of Medicine in 1912. He served an internship at the Presbyterian Hospital in Chicago in 1912 and 1913, and for five months conducted work in postmortem examinations at the Cook County Hospital. He was one of the early graduate students in the Mayo Foundation, established in 1915, and in 1920 he received from the University of Minnesota the degree of Master of Science.

Dr. Berkman returned to Rochester on November 1, 1913, as Consultant in Medicine in the Mayo Clinic. He was a member of the Medical Corps of the U. S. Army, in World War I, serving as an officer in Base Hospital 26 in France in 1918 and 1919. He was released to civilian status with the rank of major. In the early years of his service he was associated in general medicine with the late Dr. Christopher Graham, one of the founders of the medical partnership which ultimately became the Mayo Clinic. On May 1, 1919, however, he was appointed Head of a Section of Medicine in the Mayo Clinic, a post he retained until 1946, when he became a Senior Consultant. He retired from active practice in the Mayo Clinic on July 1, 1951.

Dr. Berkman was a member of the Board of Governors of the Mayo Clinic from 1933 to 1945 and of the Board of Members of the Mayo Association from 1935 to 1951. He was an Assistant Professor of Medicine in the Mayo Foundation, Graduate School, University of Minnesota.

Dr. Berkman at first confined himself to diagnostic problems, venturing later into therapeutic fields. He became exceptionally skilled as a physician, and was widely known for his crisp, incisive diagnostic decisions. He had an extensive acquaintance with the physicians of Minnesota.

His interests subsequently ranged from diabetes, diseases of the thyroid, diseases of the gastrointestinal tract, and infections of the urinary tract.

Dr. Berkman was certified by the American Board of Internal Medicine. He was a Fellow of the American College of Physicians (1928) and a member of the American Medical Association, the Minnesota State Medical Association, the Southern Minnesota Medical Association, the American Gastroenterological Association, the Alumni Association of the Mayo Foundation, the Society of the Sigma Xi, Alpha Kappa Kappa professional medical fraternity and the Psi Upsilon academic fraternity. He was for some years a member of the Executive Committee of the William T. McCoy Post of the American Legion.

Dr. Berkman was married to Frances Scott of Rochester in 1915. Dr. and Mrs. Berkman had six children: Ruth (Mrs. Dewain O. Long of Minneapolis); Helen (Mrs. Jack Klemmich of San Francisco); Louise (Mrs. Paul Tinetti of Mount

Pleasant, Michigan); Dr. David S. Berkman of Rochester; John of Rochester, and Nancy (Mrs. Burnell F. Eckhardt of Sheboygan, Wisconsin).

WESLEY W. SPINK, M.D., F.A.C.P.,  
Governor for Minnesota

#### DR. LESTER BETTS

Dr. Lester Betts, F.A.C.P., died January 12, 1958, in Schenectady, New York. Born in Grooms Corners, New York, in 1874, he received his doctorate in Medicine from the Albany Medical College in 1899. He entered medical practice in Schenectady shortly after, and practiced for 58 years in this area. He became a member of the Staff of Ellis Hospital in 1900 and was promoted to Consultant in Medicine in 1942. He was an Associate in Medicine at the Albany Medical College between 1922 and 1935.

Dr. Betts was a member of the American Medical Association, the Medical Society of the State of New York, the Schenectady Medical Society, of which he was President in 1918 and the Schenectady Clinical Society. He was elected to Fellowship in the American College of Physicians in 1917.

He is survived by his wife, Mrs. Margaret Franck Betts, 813 Union Street, Schenectady, a daughter, Mrs. Boris Radoyevich of St. James, L. I., a son, Gilbert Betts of Schenectady, and five grandchildren.

JOHN H. TALBOTT, M.D., F.A.C.P.,  
Governor for Western Division, New York State

#### DR. ALFRED E. CRONKITE

Dr. Alfred Eugene Cronkite, (Associate), Fort Lauderdale, Florida, was born in Los Angeles, California, September 9, 1912. He received his A.B. and M.D. at Stanford University and served there as an Instructor and as an Assistant in Anatomy. He was a Research Fellow in the Department of Public Health and Preventive Medicine of Stanford Medical School. He held successive fellowships in surgery and pathology at the Mayo Clinic in Rochester, Minnesota. He was a veteran of World War II, serving in the Medical Corps of the U. S. Navy.

He came to Broward County in January, 1949, and rapidly attained medical prominence and maturity. He was the first full-time pathologist to serve at the North Broward General Hospital. He established the first blood bank in Broward County and helped organize the Florida Blood Bank Clearing House. He was Broward County's first Medical Examiner and was the first to establish a Department of Forensic Pathology in the State of Florida.

He was a member of the Florida Medical Association and the American Medical Association. He was, in 1953, President of the Florida Society of Pathologists. He was a Fellow of the American College of Pathology, a member of the Mayo Foundation for Medical Research, a Fellow of the American Society of Clinical Pathology and an Associate Member of the American College of Physicians. He was a member of the Alpha Kappa Medical Fraternity, a Rotarian, and Director of the Broward County Tumor Clinic. The work nearest his heart was that of the American Cancer Society and it is ironic that he himself fell victim to neoplastic disease. He died at work on September 27, 1957, at his office in Fort Lauderdale.

Dr. Cronkite was a man who left enduring pioneer works in the field of medicine in Broward County. He accomplished the work of a long lifetime before his early death at 45.

He is survived by his wife, Mrs. Margaret R. Cronkite, 1209 N. Rio Vista Boulevard, Fort Lauderdale, Florida.

**DR. FRANK BETHEL CROSS**

Dr. Frank Bethel Cross, F.A.C.P., was born August 20, 1879, Visalia, California and died on February 26, 1958, of a coronary occlusion. He was a descendant of early American colonists in California Argonauts.

Dr. Cross received his degree of Doctor of Medicine at Columbia University College of Physicians and Surgeons in 1900. He interned at Methodist Hospital, Brooklyn, 1900-1902.

His hospital appointments were as follows: Professor of Clinical Medicine, Long Island College of Medicine; Clinical Professor Emeritus of Medicine, State University of New York College of Medicine at New York City; Emeritus Chief Attending Physician, Methodist Hospital, 1945. Consulting Physician: St. John's Victory Memorial, Bay Ridge; Midwood Samaritan; St. Luke's Hospital, Newburgh, New York, and John T. Mather Memorial Hospital, Port Jefferson, New York.

Dr. Cross was a member of the following: the American Medical Association; the Medical Society of the State of New York; the Medical Society of County of Kings; the Associated Physicians of Long Island; the Brooklyn Pediatric Society (President, 1913); the Brooklyn Clinical Society; the Brooklyn Society of Internal Medicine (President, 1918); the American and New York Diabetic Association; the New York Academy of Medicine; the New York Heart Association; the Pan American Medical Association; the Medical Group of Brooklyn and the Osler Society; a Diplomate of the American Board of Internal Medicine; a Fellow, American College of Physicians, 1920; Life Member of the Fairbanks Family of America and also an honorary member of the Union Medicale Latine.

Dr. Cross was author of numerous papers. He is survived by a son, Jackson Cross, Congress Street, Fairfield, Connecticut. It is with sad regret his loss is recorded.

IRVING S. WRIGHT, M.D., F.A.C.P.,  
Governor, Eastern Division, New York State

**DR. HOWARD W. DAVIS**

Dr. Howard W. Davis, (Associate), a Binghamton, New York, physician for more than 30 years, died in his home of a heart attack on February 25, 1958. Dr. Davis was born in Amsterdam, New York in 1892, and was graduated from the Albany Medical College in 1917. He served as a First Lieutenant in the United States Army Medical Corps in World War I and came to Binghamton thereafter. He pursued graduate work in Internal Medicine at the University of Pennsylvania School of Medicine in 1923 and 1924, and in additional training at Trudeau Sanatorium, Saranac Lake, New York.

He was former Chief-of-Staff of Wilson Memorial Hospital, Johnson City, and in 1945, served as Superintendent of the Broome County Tuberculosis Hospital. Membership in medical societies included the Binghamton Academy of Medicine, the Medical Society of the State of New York, the American Medical Association. He served as President of the Broome County Medical Society in 1933. He was admitted as an Associate to the American College of Physicians in 1925.

Dr. Davis is survived by his wife, Mrs. Belle Hayward Davis, 34 Avon Rd., Binghamton; two daughters, Mrs. John M. Grier of Hickory, N. C., and Mrs. Donald R. Connor of Falls Church, Va.; and five grandchildren.

JOHN H. TALBOTT, M.D., F.A.C.P.,  
Governor for Western New York

**DR. HAL McCLUNEY DAVISON**

Dr. Hal McCluney Davison, F.A.C.P., died in Atlanta on April 26, 1958, as a result of Hodgkin's disease. Despite his knowledge of the dark outlook, he worked



tirelessly to improve the standard of medical care in his community and he continued to care for his patients with affection and thoroughness.

Dr. Davison was born in Woodville, Georgia, on October 2, 1891. He received the degrees A.B. and Phar.B. from Mercer University in Macon, Georgia, in 1911 and his M.D. degree from Emory University School of Medicine in 1915. He interned at the New York Post Graduate Hospital from 1915-1917, and then served his country with the Evacuation Base Hospital No. 4 in Siberia, Russia. It was here that he met and married his attractive and talented wife. On returning from the service, he continued his training at the New York Post Graduate Hospital and at Cornell University Medical College.

After completion of his training he began the practice of medicine in Atlanta, pioneering the rather new field of allergic disorders. Over the years of his practice, he stimulated others to a more complete study and understanding of allergy. He was a proponent of careful, thorough diagnostic medicine and worked diligently to improve medical teaching and medical care in the hospitals and community. He served with vigor as the Chief of Medicine at the Georgia Baptist Hospital.

Dr. Davison accepted the responsibilities of organized medicine to the extent that he was President of the Fulton County Medical Society and later the Medical Association of Georgia. In 1929 he became a Fellow of the American College of Physicians. He was a past President of the American Therapeutic Society, the Southeastern Allergy Association and the American College of Allergists. Also he was a member of the Association for the Study of Internal Secretions, the Southern Medical Association, the American Academy of Allergy, the American Academy of Applied Nutrition and the American Medical Association.

Dr. Davison was a prominent figure in Atlanta medicine, he was honest, industrious and had a personal warmth that made him a friend to all he met. His civic pride and interest make his death a great loss to the city as a whole, not just to the medical profession. It is with deep regret that we record the passing of this distinguished colleague and our sympathy is extended to Mrs. Natascha Davison, their sons Peter Hal and Alexis Hal, 2888 Habersham Road, Atlanta, Georgia.

STERLING CLAIBORNE, M.D., F.A.C.P.,

Governor for Georgia

#### DR. JOHN WILLIAM DEWIS

Dr. John William Dewis, F.A.C.P., Boston, Massachusetts, died there on October 1, 1957. He was born at Advocate Harbor, Nova Scotia, Canada, on February 24, 1866. He received his Doctor of Medicine degree, cum laude, from the Harvard Medical School, Boston, Massachusetts in 1894 and an honorary Master of Arts degree from the Acadia University at Wolfville, Nova Scotia, in 1919. His post-graduate training included work at the Harvard Medical School in 1901; at the Massachusetts General Hospital in 1903-4, and the Carney Hospital in South Boston in 1904. He practiced medicine in Boston where he specialized in gastroenterology for many years and retired from active practice in 1948.

He retained his staff relationship with the John Hancock Mutual Life Insurance Company with which he had been associated since 1927. He was serving as Consulting Cardiologist at the time of his death.

Dr. Dewis was a member of the American Medical Association; the Massachusetts Medical Society; the Norfolk District Medical Society; the Boston Medical Library, and the Boston History Club. He became a Fellow of the College in 1929. In World War I, he served with the Massachusetts National Guard, retiring with the rank of major.

Dr. Dewis is survived by his widow, Mrs. Josephine Dewis, 306 Commonwealth Avenue, Boston, Massachusetts.



## DR. ROBERT FRANCIS DILLON

Dr. Robert Francis Dillon (Associate) of River Forest, Illinois, died on November 27, 1957, at the age of 36, of congestive heart failure due to rheumatic heart disease.

Dr. Dillon received a Bachelor of Science degree from the Loyola University of Chicago in 1943 and a Doctor of Medicine degree from the Stritch School of Medicine of Loyola University in 1946. Following this, he interned at the Cook County Hospital in Chicago. He took his postgraduate training in internal medicine at Mercy Hospital-Loyola University Clinic, from 1947 to 1950.

He was a member of the staff of the Stritch School of Medicine of Loyola University, where he advanced from Clinical Instructor in 1951 to Assistant Professor of Medicine, the position he held at the time of his death. He was also Cardio-physiologist at the Cook County Hospital in Chicago.

He was liked and respected by all who knew him. He was a deeply religious man with real conviction of the truth of his beliefs, and this expressed itself in his daily interpersonal relationships. He was a very hard, exacting and meticulous worker. He had a great capacity for selecting what was important from a mass of data. His hemodynamic studies on the natural transformation of ventricular septal defects into ventricular septal defects with infundibular stenosis and so-called non-cyanotic types of tetralogy of Fallot are a significant contribution to our knowledge of the dynamics of these defects.

Dr. Dillon was a member of the American Medical Association, the Illinois State Medical Society and the Cook County Medical Society, and was a Diplomat of the American Board of Internal Medicine. He was named an Associate Member of the American College of Physicians in 1957.

Although he realized very well that his rheumatic heart disease was of a serious nature, he gave unstintingly of his time, far in excess of his physical ability.

Dr. Dillon is survived by his widow, Mrs. Nancy C. Dillon, 533 Forest Avenue, River Forest, Illinois, and their five sons.

WRIGHT ADAMS, F.A.C.P.,  
Governor for Northern Illinois, A.C.P.

## DR. JAMES NICHOLAS DUNN

Dr. James N. Dunn, F.A.C.P., Saint Paul, Minnesota, died on November 15, 1957, at the age of 66 years. The cause of his death was coronary thrombosis.

Dr. Dunn was born in Alexandria, South Dakota. His preliminary education was obtained at the University of Minnesota from which he received the degree of Bachelor of Science in 1912. He received the degree of Doctor of Medicine from the University of Minnesota Medical School in 1916. Dr. Dunn served his internship at Ancker Hospital in St. Paul and had post-graduate training at St. Bartholomew's Hospital in London, England.

During World War I, Dr. Dunn served as Captain in the Army Medical Corps; he spent much of the war overseas in France.

Dr. Dunn practiced for 38 years in St. Paul, Minnesota. He was President of the Ramsey County Medical Society in 1938. He served on the Ramsey County Welfare Board for several years. Dr. Dunn was elected President of the Staff at St. Joseph's Hospital, St. Paul, in 1941. During that time he did much to initiate the solid teaching program which the hospital provides today.

Dr. Dunn is survived by his wife, Pearl, a son, James M., and four daughters: Mrs. Donal Barrer; Mrs. Keith Kuehn; Mrs. Vincent Erickson, and Mrs. Glabe Staffin; also two sisters and eleven grandchildren.

JOSEPH M. RYAN, M.D., F.A.C.P.

## DR. JOHN BAKER FITTS

Dr. John Baker Fitts, F.A.C.P., died in Atlanta, Georgia, on March 5, 1958, of cerebral arteriosclerosis, having been invalided by a cerebral thrombosis eight years before.

Dr. Fitts was born in LaGrange, Georgia on September 15, 1888, the son of William P. Fitts and Bessie Baker Fitts. He attended high school in LaGrange and in 1908 received his A.B. degree from the University of Georgia. In 1912 he received his M.D. degree from the Emory University School of Medicine.

His postgraduate training included work in New York City and a long preceptorship and association in the practice of gastroenterology with the late Dr. J. Clarence Johnson. He continued in the practice of gastroenterology until his disabling illness in 1950.

In World War I he served with the 43rd General Hospital in France, attaining the rank of Captain.

Dr. Fitts held the faculty rank of Assistant Professor of Medicine at the Emory University School of Medicine and was President of the Emory Medical Alumni Association (1933-34). He was a Diplomate of the American Board of Internal Medicine, a Fellow of the Academy International of Medicine and held membership in the American Medical Association, the Southern Medical Association, the Medical Association of Georgia and the Fulton County Medical Society. He became a Fellow of the American College of Physicians in 1929.

Dr. Fitts was known and honored for his dignity and gentle manner and his impeccable dress. As a practitioner of the art of medicine he upheld the high ideals of the profession and won the devotion of his patients and respect of his colleagues.

He is survived by his wife, Mary Flowers Fitts, 355 Redland Rd., Atlanta, Ga., and their daughter, Mrs. William Irby.

T. STERLING CLAIBORNE, M.D., F.A.C.P.,  
Governor for Georgia

## DR. JOHN ARTHUR FOLEY

On January 8, 1958, Dr. John Arthur Foley, F.A.C.P., died at his home in Boston, Massachusetts. With his passing the community of Boston lost a talented and kindly physician; the several educational institutions which he served lost an experienced and conscientious teacher; and the numerous hospital staffs and boards of which he was a member lost a wise and judicious counsellor.

Dr. Foley was born in Hopkinton, Massachusetts, on April 28, 1888. He was graduated from the Boston Public Latin School in 1907. In 1911 he was awarded the Bachelor of Arts degree by Harvard College, and in 1915 he received the degree of Doctor of Medicine from the Harvard Medical School. He served as Medical Intern at the Boston City Hospital from 1915 to 1917.

Dr. Foley's subsequent professional career is a record of continuous and faithful service to the ailing and to the institutions which serve them. From 1921 to 1930 he was an Instructor in Medicine at Tufts Medical College. In 1930 he organized the Fifth Medical Service of the Boston City Hospital and transferred his teaching affiliation to the Boston University School of Medicine. His leadership in the teaching of Boston University's students at the Boston City Hospital was attested to by his successive promotions to the rank of Clinical Professor of Medicine. At the time of his retirement from the active teaching and hospital staff in 1953, Dr. Foley was the Director of the Fifth and Sixth Medical Services. The appreciation of Boston City Hospital for his loyalty and achievement was exemplified by his being named Consultant in Medicine.

Additional perspective of his professional contributions may be gleaned from a listing of some of Dr. Foley's appointments: Chief of Staff, Sanitorium Division of

the Boston City Hospital; Professor of Biology, Emmanuel College; Chief of Staff and Trustee, St. Margaret's Hospital; Member, State Board of Registration of Nurses; and Chairman, Medical Board, Boston Retirement System. He was a member of the American Medical Association, the Massachusetts Medical Association, the Association of Examining Physicians, the American Board of Internal Medicine, and, in 1937, he became a Fellow of the American College of Physicians. In addition to the great demands upon his time and energies implicit in these professional associations, Dr. Foley conducted one of the busiest private practices in Internal Medicine of our time.

The profound sympathy of the American College of Physicians is extended to his widow, Mrs. Eleanor (Prendergast) Foley of 2 Wilbur Street, Boston, and to his five sons in their loss which we feel so keenly.

KERMIT H. KATZ, M.D., F.A.C.P.,  
Boston, Massachusetts

#### DR. ROBERT BRUCE HARKNESS

Dr. Robert Bruce Harkness, F.A.C.P., was born October 1, 1875, in Wilkes-Barre, Pennsylvania. He died in Kennett Square, Pennsylvania, January 21, 1958.

In 1899 he received the degree of Doctor of Medicine from the Memphis Hospital Medical College, Memphis, Tennessee. Subsequently he pursued postgraduate training in internal medicine in the Harvard Medical School, the University of Berlin, Germany, and in Vienna, Austria.

From 1935 to 1941 he was Director of the Barry County Health Department, Hastings, Michigan, and was a staff member of the Kellogg Foundation, Battle Creek, Michigan. He retired from active practice in 1951.

In 1939 Dr. Harkness served as President of the State Council of Health of Michigan. He became a Fellow of the American College of Physicians in 1931. He achieved the rank of Colonel in the Medical Corps, A.U.S. Among the societies in which he held membership were the American Medical Association, the Aero Medical Association, the Association of Military Surgeons, and the American Trudeau Society.

His widow, Alice C. Harkness, 305 North Broad Street, Kennett Square, Pennsylvania, survives him. His colleagues note with sadness the passing of this distinguished physician.

WILLIAM A. JEFFERS, M.D., F.A.C.P.,  
Governor for Eastern Pennsylvania

#### BRIGADIER GENERAL WILLIAM LEE HART, MC, USA (Ret.)

Brigadier General William Lee Hart, F.A.C.P., (M.C.), U.S.A., (Ret.), of San Antonio, died in Kerrville, Texas, on December 22, 1957, of cerebral thrombosis. He was born January 27, 1881, in Yorkville, S. C.

Dr. Hart received an M.D. degree from the University of Maryland School of Medicine, Baltimore, in 1906, and was in residency at the Army Medical School in 1907-1908. He did postgraduate work at the Command and General Staff School in 1926, the Army Industrial College in 1927, and the Army War College in 1931. He received a Doctor of Law degree from Baylor University in 1945, and a Doctor of Letters of Humanity degree from the Southwestern Medical Foundation in 1946.

A veteran of the Spanish-American War, he entered the United States Army Medical Corps in 1908 as a First Lieutenant and was promoted to Brigadier General in 1945. From 1937 to 1940 he was Commander of Brooke General Hospital, Fort Sam Houston, Texas, and later became Medical Director of the Eighth Service Command, Dallas. During World War I he served as Chief of the Overseas Division, Office of the Surgeon General, and Commander of the 12th Medical Regiment in the

Philippines. He was President of the Seventh Central American Medical Research Board, did research on cholera and was honored by the governments of Bolivia, Ecuador, Siberia, Poland, France, Montenegro and Panama. Following his retirement from military service in 1945, Dr. Hart became Dean of the University of Texas Southwestern Medical School, Dallas, in 1946, which position he held until 1950, when he was made Dean Emeritus.

Dr. Hart was awarded the Founders' Medal by the Association of Military Surgeons of the United States in 1942. He was a Co-founder of the Celsus Society of San Antonio, a member of the American Association for the Advancement of Science, the American Public Health Association, the Texas Academy of Science, the Geographical Society of Mexico, the Asociacion Mexicana de Medicos Militares, and the Asociacion Nacional de Venereologia. He was a member of the House of Delegates of the American Medical Association from 1928 to 1932, a Fellow of the American College of Surgeons, and became a Fellow of the American College of Physicians in 1927.

He is survived by his widow, Mrs. Mariana Catherine Hart, 133 East Mulberry Avenue, San Antonio 12, Texas; two children, William Lee, Jr., San Francisco, and Mrs. Augustus Clemens, San Angelo.

VICTOR E. SCHULZE, M.D., F.A.C.P.,  
Governor for Texas, A.C.P.

#### COLONEL VICTOR ROBERT HIRSCHMANN, (MC) U.S.A.

Colonel Victor Robert Hirschmann, F.A.C.P., (MC), U. S. Army, died of cancer April 25, 1958, at Madigan Army Hospital, Tacoma, Washington, where he was Chief of the Dermatology Service. He was born in Charleston, South Carolina, on January 6, 1911.

Colonel Hirschmann received an M.D. degree from the Medical College of South Carolina in 1933. Following an internship at Roper Hospital in Charleston, S. C., he was in private practice in Blacksburg, S. C., after which he entered the Army Medical Corps as a First Lieutenant in 1934.

Colonel Hirschmann attended the Army Medical School in 1936 and the Medical Field Service School in 1937. He received postgraduate training at Columbia University, New York City, in 1938; and in dermatology and syphilology at Duke University Hospital, Durham, N. C., from 1947 through 1949. In addition, he received residency training in dermatology and syphilology at Brooke Army Hospital, Fort Sam Houston, Texas, during 1947 and 1950. In 1950 Colonel Hirschmann obtained a Master of Science in Medicine from Baylor University at Houston, Texas.

During his 24 years of continuous service in the Army Medical Corps, Colonel Hirschmann served in three oversea areas: Europe, the Far East, and the Caribbean. In World War II he was Commanding Officer of the 24th Hospital Center, of the 132nd General Hospital at Camp McCoy, Wisconsin, 1943-1944; and of the 132nd General Hospital, when it moved to the Far East in 1945. While serving in the Far East Theater he was also Commanding Officer of the 248th and the 4th General Hospitals, the 156th Station Hospital, and Surgeon of the Philippine Base Command.

From 1947 to 1949 Colonel Hirschmann was Professor of Military Science and Tactics at Duke University after which he served as Chief of the Dermatology Section of the 97th General Hospital in Frankfurt, Germany, until the latter part of 1953. He then became Chief of the Dermatology Section of Madigan Army Hospital. His next assignment was Chief of the Dermatology Section of Gorgas Hospital, Panama Canal Zone, where he served with the Army unit there until his return to Madigan Army Hospital in January of 1958.



Colonel Hirschmann was a member of the American Medical Association, the Academy of Dermatology and Syphilology; a Diplomate of the American Board of Dermatology; and a Fellow of the American College of Physicians, 1955.

Colonel Hirschmann is survived by his wife, Marguerite E. (Brobakken) and three children, Lois, Jan, and Kristin of 9619 Lake Steilacoom Drive, Tacoma, Washington; and three brothers, Edgar, Lionel and Gerald of Charleston, South Carolina.

BRYAN C. T. FENTON, Colonel (MC) U.S.A.,  
Executive Officer

#### DR. JOHN AUGUSTUS RODDY

Dr. John A. Roddy, F.A.C.P., died at his home in Oklahoma City, Oklahoma, with a sudden myocardial infarction on January 1, 1958. He was born August 16, 1884, in Philadelphia, Pennsylvania, and received his medical degree at The Jefferson Medical College of Philadelphia in 1907. He served as an intern at the St. Joseph Hospital in Pittsburgh, Pennsylvania, in 1907 and 1908. He received postgraduate training at the Ancon Hospital, Panama Canal Zone, in 1913. In 1918 and 1919 he was in military service serving as Ward Officer, Contagious Disease Section, Chief of Medical Service and later Commanding Officer of the Base Hospital at Ft. Sill, Oklahoma.

Dr. Roddy was a leading internist in Oklahoma City and active in the St. Anthony's Hospital. In that institution he served as Director of the Clinical Laboratories from 1919 to 1921, and as Cardiologist from 1921 to 1931. He was a member of the American Medical Association, the Oklahoma State and County Medical Societies, the Association of Military Surgeons, the Association of American Bacteriologists, the American Public Health Association, and a Diplomate of the American Board of Internal Medicine. In 1923 Dr. Roddy became a Fellow of the American College of Physicians and was always active in the regional College meetings of Arkansas and Oklahoma.

Dr. Roddy was a quiet, steady, conservative physician, highly respected by the profession in his community. The members of the College extend their sympathy to his surviving wife, Mrs. Elizabeth S. Roddy.

BERT F. KELTZ, M.D., F.A.C.P.,  
Governor for Oklahoma

#### DR. HERBERT BEEKMAN SMITH

Dr. Herbert Beekman Smith died January 30, 1958, at the age of 81 at a nursing home in Elmira, New York. Dr. Smith retired in 1955 after 55 years of continuous service to his community. He was born July 27, 1876, in Brunswick, New Jersey. He graduated in 1899 from New York University and Bellevue Hospital Medical College, and, after a short period of internship, began the practice of medicine in Corning, New York.

He was affiliated with the Corning Hospital since its founding in 1900. He served as President of the Steuben County Medical Society in 1912 and was President of the Seventh District Branch of the New York State Medical Society in 1913. Other professional affiliations included the American Medical Association and a life membership in the American College of Physicians. He was appointed an Associate of the College in 1925. He served as coroner of Steuben County from 1908 until 1923, and again between 1947 and 1955, under an appointment by Governor Thomas E. Dewey.

He was married in 1900 to Nora Thomas of Bath, who died in 1953. He is survived by a daughter, Miss Marrienne E. Smith, 174—6th Avenue, Brooklyn 17, New York.



A columnist in his home town newspaper described Dr. Smith as: "A great, good man, a loyal friend, a fine public official and a beloved family doctor."

JOHN H. TALBOTT, M.D., F.A.C.P.,  
Governor for Western New York

#### DR. ROBERT BENJAMIN SMITH

The College regrets to record the death of Dr. Robert B. Smith, Associate, on February 2, 1958, at his office in Akron, Ohio. He was born in Akron on March 18, 1915. In 1937, he received the A.B. degree from Ohio State University, and in 1940, the degree of Doctor of Medicine from the College of Medicine of the same University. After an internship at Akron City Hospital, he served for two years on the Medical Staff of the Procurement and Assignments Division of the Plumbrook Ordnance Works, Sandusky, Ohio. This was followed by a residency in internal medicine at the Henry Ford Hospital, Detroit, Michigan, from 1944 until 1946. He then entered practice in Akron. At the time of his death he was a member of the Senior Staff of Akron City Hospital and Chief of the Department of Internal Medicine at St. Thomas Hospital of Akron.

Dr. Smith was a Diplomate of the American Board of Internal Medicine and a member of the Akron Society of Internal Medicine, the Summit County Medical Society, the Ohio State Medical Association, the American Medical Association, the American College of Allergists, and the American Academy of Allergists. He was elected to Associateship in the American College of Physicians in 1950.

Dr. Smith is survived by his wife, Mrs. Barbara Ann Smith, 178 Conger Avenue, Akron. To her the College extends its deep sympathy.

A. CARLTON ERNSTENE, M.D., F.A.C.P.,  
Governor for Ohio

#### DR. OLIVER CLARENCE WENGER

Dr. Oliver Clarence Wenger, F.A.C.P., of Hot Springs National Park, Arkansas, passed away January 6, 1958, at the U. S. Public Health Service Hospital, Chicago, Illinois, following a heart attack. Dr. Wenger was born September 2, 1884, in St. Louis, Missouri. He received his M.D. degree at the St. Louis University School of Medicine in 1908. He took postgraduate training in internal medicine and syphilis at the University of London, England, in 1919. Dr. Wenger resided intermittently at Hot Springs, Arkansas, where he was Director of the U. S. Public Health Service Free Clinic and Bath House from 1919 to 1936. In 1936, he was transferred to Chicago, Illinois, where he worked with venereal disease control for the Chicago Board of Health. From 1941 to 1946, he was sent by the U. S. Public Health Service to the British West Indies where he served mainly in Puerto Rico and Trinidad. He had previously been in the Military Service, serving in the Philippine Constabulary as 1st Lieutenant and Medical Inspector from 1912 to 1915, and was Captain in the Medical Corps, U. S. A., from 1917 to 1919.

In 1946, Dr. Wenger returned to Hot Springs with his family, engaging in private practice. He served as Medical Director of the Leo N. Levi Memorial Hospital since 1953 and Medical Consultant of the National Arthritis Research Foundation from 1946 to 1953.

Dr. Wenger was a member of the American Medical Association; the Arkansas State Medical Society; the Fellowship of Medicine (London, England) and Garland County Medical Society. He was a Diplomate of the American Board of Internal Medicine and a Fellow of the American College of Physicians, 1930.

Dr. Wenger is survived by his widow, Mrs. Elsi Isenman Wenger, and his daughter, Mrs. Audrey Wenger McCully, 116 Virginia St., Hot Springs, Arkansas.

## COLLEGE NEWS NOTES

### BOOKS DONATED TO THE COLLEGE LIBRARY OF PUBLICATIONS BY MEMBERS

The College gratefully acknowledges receipt of the following books from members of the College to the Memorial Library of Publications by Members of the College:

Albert F. R. Andresen, M.D., F.A.C.P., New York, N. Y., *OFFICE GASTRO-ENTEROLOGY*, published by W. B. Saunders Co., Philadelphia and London, 1958, 707 pages.

C. Sidney Burwell, M.D., F.A.C.P., Boston, Mass., *HEART DISEASE AND PREGNANCY*, published by Little, Brown & Co., Boston and Toronto, 1958, 338 pages.

Mervin J. Goldman, M.D., F.A.C.P., Oakland, Calif., *PRINCIPLES OF CLINICAL ELECTROCARDIOGRAPHY*, published by Lange Medical Publications, Los Altos, Calif., 1956, 310 pages.

Edwin Munroe Knights, Jr., (Associate), Flint, Mich., *ULTRAMICRO METHODS FOR CLINICAL LABORATORIES*, published by Grune & Stratton, New York and London, 1957, 128 pages.

Hans Lissner, M.D., F.A.C.P., and Roberto F. Escamilla, M.D., F.A.C.P., San Francisco, Calif., *ATLAS OF CLINICAL ENDOCRINOLOGY*, published by The C. V. Mosby Co., St. Louis, Mo., 1957, 476 pages.

Irvine H. Page, M.D., F.A.C.P., Cleveland, Ohio, *CHEMISTRY OF LIPIDES AS RELATED TO ATHEROSCLEROSIS*, published by Charles C Thomas, Springfield, Ill., 1958, 342 pages.

O. H. Pearson, M.D., F.A.C.P., New York City, *HYPOPHYSECTOMY*, published by Charles C Thomas, Springfield, Ill., 1957, 154 pages.

Louis L. Perkel, M.D., F.A.C.P., Jersey City, N. J., *MEDICAL TERMINOLOGY SIMPLIFIED*, published by Charles C Thomas, Springfield, Ill., 1958, 103 pages.

Abe Ravin, M.D., F.A.C.P., Denver, Colo., *AUSCULTATION OF THE HEART*, published by The Year Book Publishers, Inc., Chicago, Ill., 1958, 166 pages.

Howard A. Rusk, M.D., F.A.C.P., New York, N. Y., *REHABILITATION OF THE CARDIOVASCULAR PATIENT*, published by The Blakiston Division, McGraw Hill Book Company, Inc., New York, Toronto, London, 1958, 176 pages. Co-authors, Paul Dudley White, M.D., M.A.C.P., Philip R. Lee, M.D., and Bryan Williams, M.D.

David Scherf, M.D., F.A.C.P., and Linn J. Boyd, M.D., F.A.C.P., New York, N. Y., *CARDIOVASCULAR DISEASES* (third edition), published by Grune & Stratton, New York and London, 1958, 829 pages.

Louis H. Sigler, M.D., F.A.C.P., Brooklyn, N. Y., *THE ELECTROCARDIOGRAM*, published by Grune & Stratton, New York and London, 1957, 312 pages.

Louis Weinstein, M.D., F.A.C.P., Boston, Mass., *THE PRACTICE OF INFECTIOUS DISEASES*, published by Landsberger Medical Books, Inc., New York City, 1958, 501 pages.

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### 1958 SUPPLEMENT TO THE 1955 DIRECTORY

A new Supplement to the 1955 Directory will be published by the College and ready for distribution in November, 1958. It will contain all of the membership additions published in the 1957 Supplement and all additions since, up to May, 1958.

The Supplement will contain the biographical data of all new members, the amended By-Laws, names of awardees of medals, scholarships, and fellowships for 1956, 1957, and 1958, and additions to the deceased list. The price, prepaid, of the 1958 Supplement is \$2.50.

Any member of the College who purchased the 1955 Directory may obtain a copy of the 1958 Supplement free of charge, upon written request to the Executive Secretary of the College.

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#### SCHEDULED MEETINGS OF THE COMMITTEE ON CREDENTIALS

The Committee on Credentials of the American College of Physicians will hold meetings in Philadelphia on November 13 and 14, 1958, and on March 20 and 22, 1959. A third meeting will be scheduled at Chicago, Ill., April 17 and 18, 1959, prior to the Annual Session of the College. Proposals for action by the Committee at these meetings must be received at College headquarters at least 60 days prior to the meeting time. Governors of the College may require that proposals be in their hands 90 days prior to the meetings of the Committee on Credentials.

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#### MIDWEST REGIONAL MEETING OF THE COLLEGE

The Midwest Regional Meeting of the American College of Physicians will be held in Milwaukee, Wis., September 27, 1958, at the Milwaukee County Hospital. There are approximately 1,000 members in the States of Illinois, Indiana, Iowa, Minnesota, and Wisconsin. A scientific program of 22 papers of 15 minutes each has been arranged. A luncheon, a banquet, an entertainment in the evening, as well as a luncheon and entertainment at noon for the ladies will be scheduled. Dr. Howard P. Lewis, F.A.C.P., Portland, Ore., A.C.P. President-Elect, will be the featured speaker at the banquet. A cordial invitation is extended to all physicians, members of the College and non-members. There is no registration fee. Dr. Joseph W. Rastetter, F.A.C.P., Milwaukee, Wis., is the Chairman and Dr. Frederick W. Madison, F.A.C.P., Milwaukee, Wis., is the Chairman of the Governor's Committee.

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#### DIRECTORY OF MEDICAL AND BIOLOGICAL RESEARCH INSTITUTES OF THE U.S.S.R.

A revised "Directory of Medical and Biological Research Institutes of the U.S.S.R." has been issued by the National Institutes of Health, Public Health Service. The new edition is more comprehensive than the original 1957 edition.

The 1958 Directory lists more than 700 institutes with their subdivisions, and includes a general subject and name index. Its purpose is to facilitate the exchange of scientific information between the United States and the U.S.S.R., to provide materials for study of the organization of Russian biomedical research, and to assist scientists in planning visits to Russian research centers.

The publication of the directories is a part of the Russian scientific translation program conducted by the National Institutes of Health.

A limited supply of the 1958 edition (PHS Publication No. 587) is available. Requests for single copies should be addressed to the Publications and Reports Section, Scientific Reports Branch, National Institutes of Health, Bethesda 14, Md.

## COMING REGIONAL MEETINGS

<u>State</u>	<u>City</u>	<u>Date</u>	<u>Governor(s)</u>	<u>Official Guest(s)</u>
Michigan	Traverse City	September 19-20, 1958	H. Marvin Pollard	Dwight L. Wilbur, President E. R. Loveland, Exec. Sec.
West Virginia	Huntington	September 20, 1958	Paul H. Revercomb	Chester S. Keefer, Regent
Idaho-Utah	Sun Valley, Idaho	September 27, 1958	Richard P. Howard T. C. Bauerlein	Howard P. Lewis, President-Elect
Midwest (Ind., Ill., Iowa, Minn., Wis.)	Milwaukee, Wis.	September 27, 1958	F. W. Madison	
Western New York	Syracuse	October 3, 1958	John H. Talbott	
Southeastern (Ala., Fla., Ga., Miss., S. C., Cuba)	Biloxi, Miss.	October 3-4, 1958	D. O. Wright	
Montana-Wyoming	Casper, Wyo.	October 10-11, 1958	Wayne Gordon	
Arizona	Phoenix	October 18, 1958	William R. Hewitt	Fuller B. Bailey, Regent
Arkansas-Oklahoma	Hot Springs, Ark.	October 18, 1958	John N. Compton	Dwight L. Wilbur, President
Kentucky-Tennessee	Louisville, Ky.	October 18, 1958	Sam A. Overstreet	Charles A. Doan, 1st Vice President
District of Columbia- Maryland	Washington, D. C.	November 1, 1958	Rudolph H. Kampmeier Theodore J. Abernethy	E. R. Loveland, Exec. Sec.
Eastern Canada and New England States (Newfoundland, Nova Scotia, New Brunswick, Ontario, Quebec, Conn., Maine, Mass., N. H., R. I., Vt.)	Quebec, P.Q.	November 7-8, 1958	R. Carmichael Tilghman Walter deM. Scriver	Dwight L. Wilbur, President E. R. Loveland, Exec. Sec.
New Jersey	Newark	November 12, 1958	Edward C. Klein, Jr.	
North Carolina	Winston-Salem	December 4, 1958	Elbert L. Persons	Dwight L. Wilbur, President

## SPECIAL ANNOUNCEMENT

The book containing all of the names of those who registered at the Scientific Exhibit entitled "Evaluation of C-Reactive Protein and SGO-Transaminase in Coronary Artery Disease," at the Atlantic City meeting of the College, has been lost. Would the physicians interested in a copy of the brochure describing the exhibit please write to: Nathan H. Shackman, M.D., 1700 President Street, Brooklyn 13, N. Y.

## COURSE IN CANCER CHEMOTHERAPY

The Sloan-Kettering Institute for Cancer Research, the Memorial and James Ewing Hospitals and the Sloan-Kettering Graduate Division of Cornell University Medical College, New York, N. Y., will conduct a two-week course in Cancer Chemotherapy, October 20-31, 1958. The course will include lectures and demonstrations of screening methods, pharmacological technics, methods for the clinical evaluation of potential chemotherapeutic agents and a review of the chemistry, pharmacological effects and clinical applications of the polyfunctional alkylating agents, the antineoplastic steroids, steroid hormones and miscellaneous agents in the treatment of cancer. Selected topics will also be included. The course is principally designed for physicians interested in cancer chemotherapy. Enrollment is limited. The fee for this course, which includes a syllabus covering the subject matter presented, is \$25.00. Applications, including a brief summary of the applicant's clinical training and current appointments should be made to Dr. C. P. Rhoads, Sloan-Kettering Institute, 410 E. 68th St., New York 21, N. Y.

## 2ND ANNUAL POSTGRADUATE WEEK OF THE NEW YORK ACADEMY OF MEDICINE

The New York Academy of Medicine will hold its Second Annual Postgraduate Week, October 13-17, 1958, at New York, N. Y. The title of the program is "Research Contributions to Clinical Practice." Subjects to be reviewed are as follows: "The Diagnosis and Management of Cerebral Vascular Diseases"; "Studies of Contractile Proteins of Muscle"; "The Metabolism of the Erythrocyte"; "Studies of the LE Cell and the LE Factors"; "Influenza and Upper Respiratory Infections"; "Hereditary Aspects of Disease"; "Congenital Diseases of Blood Proteins"; "Hereditary Diseases of Connective Tissue"; "Glomerulonephritis and Pyelonephritis"; "Some Mechanisms of Bactericidal Chemotherapeutic Action"; "Observations on the Nature of Staphylococcal Infections"; "The Control of Staphylococcal Sepsis"; "Potassium Therapy"; "Hepatic Circulatory Physiology"; "Jaundice and Bilirubin Metabolism"; "Management of Portal Hypertension"; "The Radiation Hazard"; "The Fate of Sodium and Water in the Renal Tubules"; "Mechanisms of Renal Tubular Transport," and "Electron Microscopy of the Kidney in Normal and Disease States." For information write: Robert L. Craig, M.D., Secretary, Postgraduate Week Committee, The New York Academy of Medicine, 2 E. 103rd St., New York 29, N. Y.

## COURSE IN INTERPRETATION OF COMPLEX ARRHYTHMIAS

A course in Interpretation of Complex Arrhythmias will be given at Michael Reese Hospital, Chicago, Ill., by Drs. Louis N. Katz, F.A.C.P., Richard Langendorf, and Alfred Pick. This is an advanced course, intended only for experienced electrocardiographers. The class will meet daily from 9:00 a.m. to 5:00 p.m., December 8-12, 1958. Information may be obtained from the Secretary, Cardiovascular Department, Medical Research Institute, Michael Reese Hospital, Chicago 16, Ill.



## NATIONAL FOUNDATION FOR INFANTILE PARALYSIS FELLOWSHIPS

December 1 is the current deadline for applications to the National Foundation for Infantile Paralysis for postdoctoral fellowships in research and academic medicine or in the clinical fields of rehabilitation and preventive medicine. Financial support of the Fellow varies according to his previous education, his professional experience, marital status, and number of dependents. Compensation to the institution is arranged according to the program undertaken. For a full academic program, tuition and fees are allowed; for other programs, a sum not to exceed \$1,250 per year (includes tuition) is provided.

All awards are made upon recommendation of the appropriate National Foundation Fellowship Committee. U. S. citizenship is required, but those who have filed a petition for naturalization will be considered. Partial fellowships are available for qualified veterans to supplement G.I. educational benefits.

**I. FOR POSTDOCTORAL TRAINING IN RESEARCH OR ACADEMIC MEDICINE:** Awarded to applicants with an M.D. degree for basic or advanced training in laboratory research in medicine and the related biological and physical sciences. This program is not intended for experienced investigators who need support for a research project. Financial benefits, in addition to the compensation to the institution, vary from \$3,900 to \$6,000 a year. Under unusual circumstances, higher stipends may be permitted. Transportation not to exceed \$600 may be paid if foreign study is approved.

**II. FOR POSTDOCTORAL STUDY IN THE CLINICAL FIELDS OF:****A. Rehabilitation:**

- 1) For licensed physicians interested in rehabilitation as it relates to their specialty and who wish to study the concept and basic techniques of rehabilitation. One year of internship is required and license to practice in the United States.
- 2) For residents who wish specialty training in Physical Medicine and Rehabilitation. Awards are made for a period of one, two, or three years, depending upon the time required to complete eligibility requirements for certification by the American Board of Physical Medicine and Rehabilitation. Preference is given to applicants under 40 years of age.

Financial benefits, in addition to compensation to the institution for 1) or 2) above, are \$300 or \$350 per month, depending on marital status, with \$25.00 additional for each dependent child.

**B. Preventive Medicine:** For physicians who desire to prepare for the teaching of preventive medicine. Applicants must have had two years of training and experience, including responsibility for teaching, in one of the areas related to preventive medicine. Awards are made for a period of one year and are subject to renewal. Financial benefits, in addition to the compensation to the institution, vary from \$4,500 to \$6,000 a year. Under unusual circumstances, higher stipends may be permitted.

For further information write to: Division of Professional Education, National Foundation for Infantile Paralysis, 301 E. 42nd St., New York 17, N. Y.

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**SUPPORT FOR STUDIES OF ANTICANCER AGENTS**

Eight contracts with seven pharmaceutical firms for work on possible anticancer agents and for studies to improve methods of testing such compounds were announced by the Public Health Service, U. S. Department of Health, Education, and Welfare.

Merck & Co., Inc., Rahway, N. J., will receive \$275,000 for producing chemicals and hormonal substances whose preparation has been described in the scientific literature. If the compounds are found safe for humans by thorough animal tests, they will be tested against human cancer.

Three contracts are for supplying and testing materials as possible anticancer agents, and for seeking improved methods to test materials. These contracts are with Schering Corporation, Bloomfield, N. J., for \$240,000; Armour and Company, Chicago, Ill., for \$66,735; and Pitman-Moore Company, Indianapolis, Ind., for \$91,770.

The remaining four contracts are principally for studies to improve methods of testing potential anticancer compounds. Included in this work will be testing methods using tissue cultures, various bacteria and other organisms, and a number of animal tumors. The contracts are with Bristol Laboratories, Inc., Syracuse, N. Y., for \$229,753; Upjohn Company, Kalamazoo, Mich., for \$145,000; Merck & Co., for \$500,000; and Parke, Davis & Company, Detroit, Mich., for \$350,000.

The eight contracts, amounting to \$1,898,258, will be administered by the Service's Cancer Chemotherapy National Service Center at the National Cancer Institute, Bethesda, Md.

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#### 11TH WORLD HEALTH ASSEMBLY

The 11th World Health Assembly concluded a three-week session on Friday, June 13, 1958, under the Chairmanship of Dr. Leroy E. Burney, F.A.C.P., Surgeon General of the U. S. Public Health Service. The Assembly opened in Minneapolis, Minn., on May 28, 1958, with a two-day special session commemorating the organization's 10th anniversary. In attendance were delegates from all of the 85 active member nations which represented the largest participation in the organization's history. Also attending were observers from the United Nations and its specialized agencies and 32 non-governmental organizations. Among the subjects discussed were: "Malaria Eradication Programs"; "Increased Emphasis on Research"; "A Comprehensive Program to Deal with Health Implications in the Peaceful Uses of Atomic Energy"; "Global Smallpox Eradication Program," and "Sports Medicine."

The 1959 public health program to be conducted by the Assembly, includes nearly 800 projects and nearly every country and territory in the world. To accomplish this program, the Assembly adopted a budget of \$14,287,600.

The Leon Bernard Foundation award for distinguished leadership in public health was conferred upon Dr. Thomas Parran, F.A.C.P., Pittsburgh, Pa., former Surgeon General of the U. S. Public Health Service.

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#### WORLD MEDICAL ASSOCIATION

The World Medical Association has celebrated its first decade. Its activities have been multiplied rapidly. A Central Repository for Medical Credentials was started on July 1, 1958, and will help countless doctors, both in this country and all over the world. The Second World Conference on Medical Education, whose theme will be "Medicine—a Lifelong Study," will take place in Chicago in 1959.

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#### 16TH ANNUAL MEETING OF THE AMERICAN PSYCHOSOMATIC SOCIETY

The 16th Annual Meeting of the American Psychosomatic Society will be held in Atlantic City, N. J., May 2-3, 1959. The Program Committee requests that titles and abstracts of papers for consideration for the program be submitted before De-

cember 1, 1958. The time allotted for presentation of each paper will be 20 minutes. Abstracts, in octuplicate, should be submitted to Milton Rosenbaum, M.D., Chairman, Program Committee, 265 Nassau Rd., Roosevelt, N. Y.

#### REFERRAL PROGRAM OF THE NATIONAL INSTITUTES OF HEALTH

For physicians who may be interested in referring certain patients for study at the Clinical Center of the National Institutes of Health, Bethesda, Md., the following information is provided concerning diagnoses that are of particular current interest. This list supplements a more extensive compilation published each year in booklet form. Letters of referral should include an adequate history and may be addressed to the Director of the Clinical Center for registration and circulation among appropriate clinical groups. A full report of findings will be furnished the referring physician when an accepted patient is discharged back to his care.

The National Cancer Institute has particular interest in patients with the following diagnoses: Acute leukemia, any age; Hodgkin's disease without previous therapy; multiple basal cell cancers of the skin; myeloid metaplasia; protein disturbances such as macro-globulinemia, cryoglobulinemia, and idiopathic hypoalbuminemia; cancer of any type in children and choriocarcinoma.

As candidates for radiological study and treatment, patients in the following categories will be considered: Invasive carcinoma of the urinary bladder without bony or extra-pelvic metastases and without previous external radiation therapy or extravesical surgery; squamous cell carcinoma of the oropharyngeal and laryngeal cavities; carcinoma of the esophagus without evidence of metastases to neck or liver; carcinoma of thyroid; solitary myeloma and chondrosarcoma.

The Allergy and Infectious Diseases Institute has especial current interest in proved or strongly suspected cases of disseminated histoplasmosis. Studies include improved diagnostic methods, new therapeutic agents and basic immunology.

The National Heart Institute has particular need for patients with hormone producing malignancies of the adrenal gland for trial of  $\Delta 4$  cholestenone, which is an inhibitor of adrenal steroid synthesis. Patients with postoperative recurrences of adrenal malignancy are also considered suitable for trial.

Other conditions of interest to Heart Institute investigators include: Malignant hypertension, primary pulmonary hypertension, and cases which though sustained have had no serious cardiac, renal or cerebral complications; angina pectoris clearly associated with coronary artery disease; pheochromocytomas and adrenogenital syndrome.

Write to the Department of Health, Education and Welfare, Public Health Service, National Institutes of Health, The Clinical Center, Bethesda 14, Md.

#### NAVY SURGEON GENERAL'S RESERVE CONSULTANT BOARD MEETS

A group of outstanding civilian physicians met at the National Naval Medical Center, Bethesda, Md., on May 23, 1958, to discuss the Navy's Graduate Medical Training Program with the Surgeon General, Rear Admiral Bartholomew W. Hogan, F.A.C.P., (MC), U.S.N., and his staff.

The Navy's Graduate Medical Training Program was planned and instituted at the close of World War II by several of the members of the Board who were Rear Admirals, Commodores and Captains in the U. S. Naval Reserve, on active duty at that time. Since their release from active duty, they have continued their interest in the Navy and have given freely of their time and advice, visiting the Navy's medical facilities at the request of the Surgeon General, to review the training programs. Among those attending the meeting were three Fellows of the College: Drs. F. J.

Braceland, Director of the Institute of Living, Hartford, Conn.; Richard A. Kern, Past President of the College and Emeritus Professor of Medicine, Temple University, Philadelphia, Pa., and Alphonse McMahon, Associate Professor of Medicine, St. Louis University, St. Louis, Mo.

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#### INSTITUTE FOR ADVANCEMENT OF MEDICAL COMMUNICATION

The Institute for Advancement of Medical Communication, a non-profit organization, was formed recently to study and develop methods of increasing the efficiency of information exchange between medical scientists, medical educators, and practicing physicians. The functions of the institute will be financed by general and research grants from private foundations and from agencies, private and federal, which support medical research. Among the charter members of the Board of Directors is Dr. Irving S. Wright, F.A.C.P., Cornell University Medical College, New York, N. Y. An Advisory Board, consisting of a panel of experts in the various techniques and disciplines concerned with medical communication, is being selected. For information write Dr. R. H. Orr, Executive Director, 37 E. 67th St., New York 21, N. Y.

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#### 27TH ANNUAL MEETING OF THE AMERICAN ACADEMY OF PEDIATRICS

The 27th Annual Meeting of the American Academy of Pediatrics will be held at the Palmer House, Chicago, Ill., October 18-19, 1958. The program will consist of seminars limited to 35-50 physicians, presented on October 18-19; round table discussions limited to 35-50 physicians to be held concurrently with the General Sessions, on October 20 and 22. General Sessions will be conducted October 20-23, and scientific and commercial exhibits will be available throughout the meeting period. A Banquet and a ladies' entertainment program will supplement the scientific program. For information write: Executive Office, American Academy of Pediatrics, 1801 Hinman Avenue, Evanston, Ill.

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#### 3RD CONGRESS OF THE INTERNATIONAL ASSOCIATION OF ALLERGOLOGY

The 3rd Congress of the International Association of Allergology will be held in Paris, France, October 19-26, 1958, under the sponsorship of the International Association of Allergology and the French Allergy Association. The Program includes: (a) Symposia on asthma and emphysema, immunology, recent clinical advances, biochemical aspects, auto-immune reactions, dermatology, and socio-economic aspects. Participants are world authorities in special fields—Pasteur Vallery-Radot, Löffler, Grabar, Dixon, Chase, Forsham, Sir Henry Dale, Halpern, Schild, Harrington, Dausset, Sulzberger, Jadassohn and many others. (b) Sectional papers, limited to 10 minutes, on any phase of allergy. (c) Round table small group luncheon conferences on selected subjects led by international authorities. (d) Post-convention tours. (e) Social—a very enjoyable program has been arranged. For registration and Congress information write to Dr. B. N. Halpern, 197 Boulevard St. Germain, Paris VII, France.

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#### WORLD CONGRESS OF GASTROENTEROLOGY

The World Congress of Gastroenterology was held in Washington, D. C., May 25-31, 1958. Dr. Henry L. Bockus, F.A.C.P., Philadelphia, Pa., served as Chairman of the World Congress Central Committee, and Dr. H. Marvin Pollard, F.A.C.P., Ann Arbor, Mich., was Secretary-General.



Nearly 2,000 were in attendance, of which a major portion were physicians from 53 countries of the world. Over 200 individuals appeared on the program from 44 countries.

Scientific programs included original contributions on the subjects: "Gastrointestinal Physiology"; "Affections of the Pancreas and Biliary Tract"; "Peptic Ulcer"; "Intestinal Malabsorption"; "Nutritional and Physiological Aspects of Affections of the Liver and Pancreas"; "Intestinal Infections and Infestations"; "Symposium on Education of Gastroenterologic Internist"; "Affections of the Liver—Clinical Aspects"; "Affections of the Intestines—Pathological and Clinical Features"; "Gastric Carcinoma"; "Gastric Surgery and its Consequences"; and "Upper Gastrointestinal Hemorrhage and Gastric Affections." Symposia were presented on: "Peptic Ulcer—Epidemiology and Etiology"; "Malabsorption and Sprue-Like States"; "Nutrition and its Effects on the Liver and Pancreas"; "Intestinal Infections and Infestations"; and "Cancer of the Stomach." The proceedings will be published in a single volume and also as a series in the July, August, September, and October, 1958 issues of *Gastroenterology*.

A series of five scientific tours enabled members to visit the important medical centers located in Washington, D. C. There were 27 technical and 27 scientific exhibits, and three different post-Congress tours were arranged primarily for the foreign participants.

In addition to the scientific program, there was a reception on Sunday, May 25, a tour of the National Naval Medical Center at Bethesda, Md., on May 26, a concert by the National Symphony Orchestra on the evening of May 26, and a banquet at the Sheraton Park Hotel on Tuesday, May 27.

Four other organizations in the field of Gastroenterology held concurrent sessions. They were: The American Gastroenterological Association; The American Gastroscopic Society; the Gastroenterology Research Group, and the American Association for the Study of Liver Diseases.

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#### AMERICAN SOCIETY OF INTERNAL MEDICINE

The second Annual Meeting of the American Society of Internal Medicine, founded at the time of the Boston Session of the College, was held at Chalfonte-Haddon Hall, Atlantic City, April 27, 1958. Forty established component Societies of Internists at the State, Territorial and District level were represented in the House of Delegates, which had a total voting attendance of 67. Observers from five other States were welcomed and many members of component Societies attended.

Dr. Elbert L. Persons, F.A.C.P., Durham, N. C., after election in Boston, assumed the Presidency, and Dr. Clark C. Goss, F.A.C.P., Seattle, Wash., became President-Elect. The new Secretary-Treasurer is Dr. George K. Wever, F.A.C.P., Stockton, Calif., and his Assistant is Dr. Clyde C. Greene, Jr., (Associate), San Francisco, Calif. Dr. H. Marvin Pollard, F.A.C.P., Ann Arbor, Mich., is a new member of the Executive Committee, which met twice with the Liaison Committee of the College; Dr. Joseph D. McCarthy, Regent, Dr. Charles M. Caravati, Governor, and Dr. Robert Wilson, Regent and Chairman of the Liaison Committee.

The American Society of Internal Medicine is a federation of Societies of qualified Internists who are active in the practice and teaching of Internal Medicine as a Specialty. These Societies, at the State level, have many opportunities and responsibilities if the present level of medical care is to be preserved, and will be able to complement and supplement the activities of the College in various ways. Every member of a component Society is also a member of the American Society of Internal Medicine and represented by the delegates from his Society at the Annual Meeting, held each year at the time and place of the Annual Session of the College. Qualifications



for membership are bilateral and must be determined at the State level, based on adequate training and experience in the Specialty and recognition in the community as a Specialist. Inquiries as to membership should be directed to the Secretary, American Society of Internal Medicine, 350 Post St., San Francisco 8, Calif.

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INTERNATIONAL MEETINGS, 1958-1959

- INTERNATIONAL CONGRESS OF ALLERGOLOGY, Paris, France, Oct. 19-26, 1958. Dr. Samuel M. Feinberg, President, 303 E. Chicago Ave., Chicago 11, Ill.
- INTERNATIONAL CONGRESS OF COMPARATIVE PATHOLOGY, Munich, Germany, Oct., 1958. Dr. Louis Grollet, 7, rue Gustave Nadaud, Paris 16, France.
- LATIN AMERICAN CONGRESS ON MENTAL HEALTH, Lima, Peru, Oct., 1958. Dr. Baltazar Caravedo, Secretary-General, Avenida del Golf 1040, San Isidro, Lima, Peru.
- INTER-AMERICAN CONGRESS OF RADIOLOGY, Lima, Peru, Nov. 2-8, 1958. Dr. Jorge de la Flor, Secretary, Hospital Arzobispo, Loayza, Lima, Peru.
- INTERNATIONAL LEPROSY CONGRESS, New Delhi, India, Dec. 8-14, 1958. Dr. Dharmendra, Secretary, Leprosy Research Dept., School of Tropical Medicine, Calcutta 12, India.
- CONFERENCE ON INTERNATIONAL UNION FOR HEALTH EDUCATION OF THE PUBLIC, Brussels, Belgium, May, 1959. Mr. M. Lucien Viborel, Secretary-General, 92, rue St. Denis, Paris 1, France.
- INTERNATIONAL FERTILITY ASSOCIATION, Amsterdam, Netherlands, June 29-July 4, 1959. Dr. Carlos Nouel, Secretary-General, Villa Olimpia, Av. Buenos Aires, Los Caobos, Caracas, Venezuela.
- INTERNATIONAL CONGRESS OF PEDIATRICS, Montreal, Que., Can., July 19-25, 1959. Dr. R. L. Denton, 2300 Tupper St., Montreal 25, Que., Can.
- INTERNATIONAL CONGRESS OF RADIOLOGY, Munich, Germany, July 23-30, 1959. Prof. Hans v. Braunbehrens, General Secretary, Frankfurt am Main, Forsthausstrasse 76, Germany.
- WORLD CONFERENCE ON MEDICAL EDUCATION, Palmer House, Chicago, Ill., Aug. 30-Sept. 4, 1959. Dr. Louis H. Bauer, 10 Columbus Circle, New York 19, N. Y.
- INTERNATIONAL LEAGUE AGAINST RHEUMATISM, Istanbul, Turkey, Sept. 18-21, 1959. Prof. Hami Kocas, Medical School, Ankara, Turkey.
- INTERNATIONAL TUBERCULOSIS CONFERENCE, Istanbul, Turkey, Sept. 11-18, 1959. Dr. T. I. Gokce, Secretary-General, Selime Hatun, Mezarlik Sokak, Taksim, Istanbul, Turkey.
- WORLD CONGRESS FOR PHYSICAL THERAPY, Paris, France, Sept. 6-12, 1959. Miss M. J. Neilson, Tavistock House, Tavistock Square, London, W.C. 1, England.
- INTERNATIONAL CONGRESS OF CLINICAL PATHOLOGY, Madrid, Spain, June 13-17, 1959. Dr. J. Aparicio, Secretary-General, Sandoval 7, Madrid, Spain.
- INTERNATIONAL CONGRESS ON GOITER, London, England, July 6-8, 1959. Dr. John C. McClintock, 149½ Washington Ave., Albany, N. Y.
- INTERNATIONAL CONGRESS OF PHYSICAL MEDICINE, Washington, D. C., Aug. 21-26, 1959. Dr. W. J. Zeiter, 2020 E. 93rd St., Cleveland, Ohio.
- INTERNATIONAL SOCIETY OF HEMATOLOGY, Tokyo, Japan, Aug. 25, 1959. Dr. Sol Haberman, 3500 Gaston Ave., Dallas, Tex.

WORLD CONGRESS OF THE INTERNATIONAL SOCIETY FOR THE WELFARE OF CRIPPLES, New York, N. Y., Aug. 29-Sept. 2, 1959. Mr. Donald V. Wilson, Secretary-General, 701 1st Ave., New York 17, N. Y.

CONGRESS OF INTERNATIONAL SOCIETY FOR CELL BIOLOGY, Paris, France, Sept. 7-9, 1959. Prof. Chevrement, 20, rue de Pitteurs, Liege, Belgium.

INTERNATIONAL CONGRESS OF NUTRITION, Washington, D. C., Sept. 1-7, 1959. Dr. Milton O. Lee, General Secretary, 9650 Wisconsin Ave., Washington 14, D. C.

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### PERSONAL NOTES

Dr. Esmond R. Long, M.A.C.P., Pedlar Mills, Va., Emeritus Professor of Pathology, Henry Phipps Institute of the University of Pennsylvania, gave the First Annual Marcy Lecture in honor of Dr. C. Howard Marcy, F.A.C.P., Pittsburgh, Pa. The subject of the presentation was "Tuberculosis in Our Time." Dr. Marcy was honored for his service to the Tuberculosis League of Pittsburgh of which he was Medical Director for 29 years. He is a past President of the Pennsylvania Tuberculosis and Health Society and is also a member of the Board of Directors.

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Dr. Sidney S. Sobin, (Associate), Los Angeles, Calif., was recently appointed a Consultant in Cardiology by the California State Board of Health to serve in an advisory capacity during 1958.

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Dr. Helmuth Ulrich, F.A.C.P., Boston, Mass., was named the "Man of the Year" by the Boston University School of Medicine Alumni Association. Dr. Ulrich is the fifth alumnus to receive the award.

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Dr. Raymond S. Jackson, F.A.C.P., Associate Professor of Medicine at the New York University Post-Graduate Medical School, has been appointed Administrator of the University Hospital of the New York University-Bellevue Medical Center, it was announced recently by Dr. George E. Armstrong, F.A.C.P., Vice Chancellor for Medical Affairs. Since joining the staff of New York University-Bellevue Medical Center in 1950, Dr. Jackson has also been Director of the Outpatient Clinic for the Fourth Medical (NYU) Division at the Bellevue Hospital Center; Director of Ambulatory Services at University Hospital; and a member of the New York University-Bellevue Medical Center Study Group. He is currently Special Assistant to the Director of the Medical Center and Coordinator of Planning for a new 600-bed, 19-story University Hospital which he will administer when completed.

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Dr. James M. Moss, F.A.C.P., Alexandria, Va., was recently elected Chairman of the Medical Council of the Washington Metropolitan Area for 1958-59. The Council is composed of the officers of the six medical societies in the Washington Metropolitan area. The function of the Council is to provide the six societies with a means for discussion and coordination of medical activities that concern the entire area. Dr. Moss is President of the Alexandria Medical Society and Clinical Associate Professor of Medicine at the Georgetown University School of Medicine.

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Dr. LeRoy H. Sloan, F.A.C.P., Chicago, Ill., former President of the American College of Physicians, received the Distinguished Service Award of the University of Chicago Medical Alumni Association on June 12, 1958. Dr. Sloan was introduced

by Dr. Walter L. Palmer, F.A.C.P., Professor of Medicine at the University of Chicago, and also a former President and now a Regent of the American College of Physicians.

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Five members of the College from the State of Georgia attended the 3rd World Congress of Cardiology in Brussels, Belgium, September 14-21, 1958. They were: Drs. Joseph C. Masee, F.A.C.P.; Arthur J. Merrill, (Associate), and Carter Smith of Atlanta; Harry Harper, Jr., F.A.C.P., and A. Calhoun Witham (Associate), of Augusta.

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Dr. Helen B. Taussig, F.A.C.P., Associate Professor of Pediatrics at The Johns Hopkins University School of Medicine, Baltimore, Md., returned June 24, 1958, from a one-month tour of medical facilities in the Soviet Union. She headed a delegation of six women physicians and scientists from the United States. The visit was the result of an exchange agreement between the American government and the U.S.S.R., by which a similar group of Russian women physicians spent a month in this country last year, visiting The Johns Hopkins University School of Medicine and five other medical institutions. Agencies sponsoring the American visit to Russia were the National Academy of Sciences, the Rockefeller Foundation, the American Women's Medical Association and the American Medical Association. The group which Dr. Taussig headed included the following: Drs. Leona Baumgartner, New York City Commissioner of Health, New York, N. Y.; Thelma B. Dunn, F.A.C.P., Cancer Investigator with the National Institutes of Health, Bethesda, Md.; Jean Henley, Chief of Anesthesiology, College of Physicians and Surgeons, New York, N. Y.; Esther C. Marting, Radiologist, University of Cincinnati College of Medicine, Cincinnati, Ohio, and Margaret H. Sloan, National Academy of Sciences, Washington, D. C.

Dr. Taussig's observations of her visit to Russia included an endorsement of such scientific and cultural exchanges, a notation that Russian medical progress has been greater in public health than in clinical medicine, and that the seemingly high percentage of Russian women physicians is misleading, in that it includes skilled nursing and technicians giving medical services.

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Dr. John S. Chambers, F.A.C.P., Lexington, Ky., is President of the Kentucky Medical Foundation, an organization to promote better medical care throughout the state. The Foundation has sponsored the creation of a new medical school and medical center now under construction at the University of Kentucky at Lexington.

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Dr. Michael W. Shutkin, F.A.C.P., Milwaukee, Wis., was advanced to Associate Clinical Professor at Marquette University School of Medicine, Milwaukee, Wis., on July 1, 1958.

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Dr. Ivan L. Bennett, Jr., F.A.C.P., Baltimore, Md., was appointed Baxley Professor of Pathology and Director of the Department at The Johns Hopkins University School of Medicine and Pathologist-in-Chief at the Johns Hopkins Hospital. Dr. Bennett is the fourth person to head the department and, at the age of 36 years, is the youngest to have received the appointment. Prior to his new appointment, he had been Professor of Medicine at the same institution. His major field of investigative work is in infectious diseases.

The American Cancer Society recently honored Dr. Kenneth M. Lynch, F.A.C.P., President and Dean of the Faculty of the Medical College of South Carolina, Charleston, S. C., "for outstanding service in the cause of cancer control."

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Dr. Lawrence B. Reppert, F.A.C.P., San Antonio, Tex., was recently elected Secretary-Treasurer of the International Medical Assembly of Southwest Texas.

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Several members of the College were guest speakers at the Fall Clinical Conference of the Kansas City Southwest Clinical Society, held in Kansas City, Mo., September 22-25, 1958. Included were: Dr. Henry L. Bockus, F.A.C.P., Philadelphia, Pa., Dr. Richard B. Capps, F.A.C.P., Winnetka, Ill., Dr. John Collins Harvey, F.A.C.P., Baltimore, Md., Dr. Robert P. McCombs, F.A.C.P., Boston, Mass.

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Dr. William B. Bean, F.A.C.P., Professor and Head of the Department of Internal Medicine, at the State University of Iowa College of Medicine, Iowa City, Iowa, was nominated by President Dwight D. Eisenhower for membership on the Board of Regents of the National Library of Medicine. He also was elected a Governor of the American College of Chest Physicians at the recent Annual Session of the Organization and participated in the coast-to-coast television program entitled "Grand Rounds." The subject of the program was "The Current Therapy of Diabetes."

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Dr. Charles E. Lyght, F.A.C.P., Director, Medical Publications, Merck Sharp & Dohme Research Laboratories, Rahway, N. J., presented the Chairman's Report of the Medical Section at the concluding meeting of the American Drug Manufacturers Association, White Sulphur Springs, W. Va., May 26-28, 1958. Dr. Lyght also participated in a symposium marking the establishment of a Medical Section of the Canadian Pharmaceutical Manufacturers Association at the meeting held at Ste. Adele, Quebec, Can., June 1-3, 1958.

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Dr. Allen H. Bunce, F.A.C.P., Atlanta, Ga., Honorary President of the Fulton County Medical Society and past President of the Medical Association of Georgia, received the first distinguished service award to be presented by the State Association at the Annual Session held in Macon, Ga., recently.

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Dr. Henry Rappaport, F.A.C.P., Chicago, Ill., discussed the subject, "Myeloproliferative Diseases," and Dr. George F. Lull, F.A.C.P., Chicago, Ill., addressed the conference on behalf of the American Medical Association at the 4th Annual Rocky Mountain Cancer Conference held at Denver, Colo., July 9-10, 1958.

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Several members of the College were advanced in academic rank recently at Temple University School of Medicine, Philadelphia, Pa. Included were: Drs. Morris Kleinbart, F.A.C.P.; Charles R. Shuman, F.A.C.P.; William A. Steiger, F.A.C.P., and Jacob Zatuchni, F.A.C.P., who were named Associate Professors of Medicine and Dr. Albert J. Finestone, (Associate), was named Assistant Professor of Medicine.



Dr. Thomas M. Durant, F.A.C.P., Professor and Head of the Department of Medicine, Temple University School of Medicine, Philadelphia, Pa., was Visiting Professor at the Ohio State University Hospital, Columbus, Ohio, May 19-21, 1958. On September 4-5, 1958, he participated in a Clinical Pathological Conference and delivered a series of three papers entitled "The Management of Patients with Resistant Congestive Failure"; "Cardiac Emergencies"; and "Manifestations and Management of Coronary Atherosclerosis," at the Samuel Merritt Hospital in Oakland, Calif. Dr. Durant will speak at the Mayo Clinic in Rochester, Minn., on October 3 on "Medical Education: Responsibilities and Potentialities," and on October 19 at the meeting of the Missouri Heart Association, St. Louis, Mo., on the subject "Cardiac Arrhythmias: Diagnosis and Management."

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Dr. Fred B. Rogers, (Associate), Professor of Preventive Medicine, Temple University School of Medicine, Philadelphia, Pa., was appointed Assistant Secretary-Treasurer of the American Board of Preventive Medicine at the Annual Meeting in Minneapolis, Minn., on May 24, 1958. On June 27, 1958, Dr. Rogers presented a paper on "Prevention and Control of Hospital Infections" at the 8th Annual New York Institute for Hospital Administrators of the American Hospital Association, at the Francis Delafield Hospital, New York, N. Y.

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Dr. William H. Perloff, (Associate), Associate Professor of Medicine, Temple University School of Medicine, Philadelphia, Pa., made a month's lecture tour of the medical schools of South America, starting June 20, 1958. He visited Bogota, Lima, Santiago, Buenos Aires, Sao Paulo, and Rio de Janeiro.

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Dr. Charles R. Shuman, F.A.C.P., Assistant Professor of Medicine, Temple University School of Medicine, Philadelphia, Pa., discussed the subject, "Current Theories in Management of Diabetes," at the 43rd Annual Convention of the Catholic Hospital Association of the United States and Canada, at Atlantic City, N. J., June 24, 1958.

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Dr. Harry Shay, F.A.C.P., Professor of Clinical Medicine and Director of the Fels Research Institute, Temple University School of Medicine, Philadelphia, Pa., was elected an Affiliate of the Royal Society of Medicine recently.

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Dr. William R. Mathews, F.A.C.P., Pathologist of the Confederate Memorial Center, Shreveport, La., was honored on June 19, 1958, by 110 physicians who assembled at the Center for a program of clinical seminars. Dr. Hans Popper, F.A.C.P., New York, N. Y., presented the First Annual W. R. Mathews Lectureship and discussed "Hepatitis and Cirrhosis." A plaque was presented to Dr. Mathews commemorating the establishment of the annual lectureship in his honor.

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Dr. Carl S. Nadler, F.A.C.P., New Orleans, La., has been elected President of the Louisiana Society of Internal Medicine and Dr. Morris Shushan, F.A.C.P., New Orleans, La., is the newly-elected Secretary-Treasurer.



Dr. George E. Burch, Jr., F.A.C.P., Professor and Chairman of the Department of Medicine, Tulane University School of Medicine, New Orleans, La., participated in the meeting of the American Society for Clinical Investigation, where he discussed "Asian Influenza"; attended the meeting in Washington, D. C., of the United States Public Health Service Commission on Influenza Research, May 16, 1958, and flew to Thule, Greenland, to attend the meeting of the Advisory Commission of Environmental Medicine, May 17-24, 1958.

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Dr. Samuel B. Nadler, Jr., F.A.C.P., New Orleans, La., has been elected Vice President of the Southwestern Section of the American Society of Nuclear Medicine.

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Dr. Grace A. Goldsmith, F.A.C.P., Professor of Medicine, Tulane University School of Medicine, New Orleans, La., participated in the meeting of the Food Industries Advisory Committee of the National Foundation, by presenting a paper on "Interrelationships of Amino Acids and Other Nutrients that Affect Protein Requirements," and was a participant on a panel which discussed "Fat Metabolism and Health."

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Dr. William D. Davis, Jr., F.A.C.P., New Orleans, La., presented a scientific exhibit on "Intrasplenic Approach to the Portal Circulation," at the World Congress of Gastroenterology, May 25-31, in Washington, D. C.

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Dr. Michael M. Dacso, F.A.C.P., Associate Professor of Physical Medicine and Rehabilitation, New York University-Bellevue Medical Center, New York, N. Y., visited the Territory of Hawaii as a Special Consultant for the United States Public Health Service—Bureau of Chronic Illnesses recently. While in the Territory, he consulted with the local public health authorities.

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Dr. Maxwell M. Wintrobe, F.A.C.P., Professor of Medicine and Head of the Department, University of Utah College of Medicine, Salt Lake City, Utah, was awarded the Gold Headed Cane on June 11, 1958, at the University of California School of Medicine in San Francisco, California. Prior to the presentation of the award, he spoke on the subject, "Research and the Art of Medicine." On June 23, 1958, he started an extensive tour of medical institutions in Australia, New Zealand, South Africa, Kenya and Tanganyika and Rome, Italy. He gave a series of talks in Auckland, Wellington, Brisbane, Sidney, Melbourne, Adelaide and Perth in New Zealand and Australia and in Capetown and Durban, South Africa. He observed the unique medical problems encountered among the Bantus and other natives of Africa and was chosen to give the A. Ferrata Lecture at the 7th International Congress of Hematology in Rome, Italy.

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Seven members of the College, three civilians and four members of the Medical Corps of the U. S. Army, participated in the Second U. S. Army Civilian Consultants' and Hospital Commanders' Conference, which was held at the U. S. Army Hospital, Fort George G. Meade, Md., May 28-29, 1958. The three Fellows who served as Civilian Medical Consultants are: Drs. Sidney G. Page, Jr., Richmond, Va.; Robley D. Bates, Jr., Richmond, Va., and Frank T. Moore, Akron, Ohio. Those who participated as members of the Medical Corps of the U. S. Army were: Colonel Homan

E. Leech, (Associate), Deputy Surgeon, Second U. S. Army, Fort George G. Meade, Md.; Colonel Charles S. Mudgett, F.A.C.P., Commander, U. S. Army Hospital, Fort George G. Meade, Md.; Colonel Kenneth A. Brewer, F.A.C.P., Commander, Ireland Army Hospital, Fort Knox, Ky., and Lt. Colonel Jules J. McNerney, F.A.C.P., Chief of Medicine, Ireland Army Hospital, Fort Knox, Ky.

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Lt. Colonel William H. Meroney, (Associate), (MC), U. S. Army, was recently appointed Associate Clinical Professor of Medicine at the University of Puerto Rico School of Medicine, San Juan, Puerto Rico, and Consultant in Internal Medicine, at the Bayamon District Hospital of the Department of Health, Commonwealth of Puerto Rico.

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Rear Admiral Edward C. Kenney, F.A.C.P., (MC), U. S. Navy, Washington, D. C., represented the Surgeon General of the Navy at the 12th Naval District Symposium on Medical Problems of Modern Warfare and Civil Disaster, which was held at San Francisco, Calif., June 19-20, 1958, and at the 6th Annual National Medical Civil Defense Conference in San Francisco, Calif., June 21, 1958. He presented papers on the subjects, "Introduction to the Problems," at the first meeting and "Casualty Analysis and Estimate of Workload," at the latter. He recently assumed new duties as Assistant Chief for Personnel and Professional Operations of the Bureau of Medicine and Surgery and has been appointed Alternate to the Board of Governors of the College for the Navy Medical Department.

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Dr. Abraham H. Aaron, F.A.C.P., Emeritus Professor of Clinical Medicine, University of Buffalo School of Medicine, and Editor of the *American Journal of Digestive Diseases*, Buffalo, N. Y., was honored at the recent World Congress of Gastroenterology in Washington, D. C. Dr. Sara M. Jordan, F.A.C.P., Boston, Mass., presented the Friedenwald Medal to Dr. Aaron, in recognition of his distinguished contribution to the clinical practice of Gastroenterology.

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Dr. Maurice S. Segal, F.A.C.P., Clinical Professor of Medicine, Tufts University School of Medicine, Boston, Mass., participated in several medical meetings as a part of his duties as President of the New England Division of the American College of Chest Physicians. He discussed the paper presented by Dr. Alvan L. Barach, F.A.C.P., New York, N. Y., on the subject, "The Ventilatory Response in Pulmonary Emphysema," at the sectional meeting held at St. Vincent's Hospital in Worcester, Mass., on April 19, 1958. On June 16, 1958, he presented a paper on "Physiologic Evaluation and Preparation of the Patient for Thoracic Surgery," at a three-day postgraduate course sponsored by the City of Hope Medical Center Postgraduate School in Duarte, Calif. During the Annual Meeting of the American College of Chest Physicians held in San Francisco, June 18-22, he participated in a Round Table Luncheon Panel which discussed "Management of Chronic Respiratory Insufficiency." On July 24, he gave an orientation lecture on "Acute Respiratory Emergencies" for the resident medical staff of the Boston City Hospital.

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Dr. John Lansbury, F.A.C.P., Professor of Clinical Medicine, Temple University School of Medicine, Philadelphia, Pa., received a grant of \$15,660 from the National Advisory Arthritis and Metabolic Diseases Council of the U. S. Public Health Services recently. This was the largest of these current grants made to Temple University and will be used for postgraduate training purposes.

Major General Dan C. Ogle, F.A.C.P., U. S. Air Force (MC), Surgeon General, Washington, D. C., received an honorary degree of Doctor of Laws from his Alma Mater, Eureka College, Eureka, Ill., on June 8, 1958, in recognition of his exceptional achievements in his field. He also presented the commencement address at the exercises.

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Dr. Roger I. Lee, M.A.C.P., Boston, Mass., former Governor, Regent, and President of the American College of Physicians, and past President of the American Medical Association, was honored recently at the Harvard Medical School. A citation honoring Dr. Lee was presented by the members of the faculty of the School of Public Health of which Dr. Lee was first Acting Dean of the Faculty.

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Dr. Hugh H. Hussey, Jr., F.A.C.P., was named Dean of the Georgetown University School of Medicine, Washington, D. C., recently. Dr. Laurence H. Kyle, F.A.C.P., Professor of Medicine, Georgetown University School of Medicine, has been appointed Chairman of the Department of Medicine, succeeding Dr. Hussey.

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Dr. Louis P. Hastings, F.A.C.P., Hartford, Conn., was reappointed to the Connecticut Medical Examining Board by Governor Ribicoff upon recommendation by the Connecticut State Medical Society. Dr. Hastings has served on the Board for ten years.

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Dr. Edward Humphrey Reinhard, F.A.C.P., St. Louis, Mo., was appointed Director of Private Medical Service of the Barnes Hospital, St. Louis, Mo., on July 1, 1958.

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Dr. Richard J. Bing, F.A.C.P., St. Louis, Mo., was elected an Affiliate of the Royal Society of Medicine of London, England, on April 15, 1958.

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Three members of the College who are officers in the Medical Corps of the U. S. Navy, were assigned new duties recently. The men and their new appointments are: Rear Admiral I. L. V. Norman, F.A.C.P., Bureau of Medicine and Surgery, Navy Department, Washington, D. C., Inspector General, Medical, in the Bureau of Medicine and Surgery; Captain Cecil L. Andrews, F.A.C.P., Commanding Officer of the U. S. Naval Hospital, St. Albans, Long Island, N. Y., and Captain Eugene V. Jobe, (Associate), Director, Professional Division, Bureau of Medicine and Surgery.

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Among the 12 faculty members who were advanced in academic rank at the State University of New York Downstate Medical Center in Brooklyn, N. Y., recently, was Dr. Harold A. Lyons, F.A.C.P., who was appointed Professor of Medicine.

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Two Fellows and two Associates of the College participated in the First Seminar on Medical Aspects of Workmen's Compensation which was held in Puerto Rico, May 26-29, 1958. The program was sponsored by the Industrial Commission of Puerto Rico and the American Academy of Compensation Medicine of New York. Dr. A. Wilbur Duryee, F.A.C.P., Professor of Clinical Medicine, New York University

Post-Graduate Medical School, and Chief, Vascular Clinic, Bellevue and University Hospitals, New York City, and Dr. William B. Rawls, F.A.C.P., Attending Physician and Chief of Arthritis Clinic, New York Polyclinic Medical School and Hospital, were members of a Visitors' Panel. Dr. Hiram Vazquez Milan, (Associate), Medical Director of the Industrial Commission, San Juan, Puerto Rico, and Dr. Ernesto J. Marchand, (Associate), Professor at the University of Puerto Rico School of Medicine, San Juan, Puerto Rico, served on a panel of local physicians.

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Six Fellows of the College from the State of South Carolina were elected officers of the South Carolina Society of Internal Medicine at the Annual Meeting of the Society held in May, 1958. The elected men were: Drs. Ben N. Miller, Jr., Columbia, President; George R. Wilkinson, Greenville, Vice President; Richard M. Christian, Greenwood, Secretary-Treasurer; Hugh P. Smith, Sr., Greenville, Robert Wilson, Charleston, and O. B. Mayer, Columbia, Council Members.

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Dr. J. Edward Berk, F.A.C.P., Detroit, Mich., was elected President of the American Gastroscopic Society at the Annual Meeting held in Washington, D. C., May 25, 1958. Dr. Berk was also elected Secretary to the Detroit Gastroenterological Society recently.

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Dr. George L. Waldbott, F.A.C.P., Detroit, Mich., was awarded first prize for an exhibit on "Contact Dermatitis," at the Session on Occupation Allergy of the European Academy of Allergy in The Hague, Holland, May 14-24, 1958.

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Dr. Elwood A. Sharp, F.A.C.P., Medical Assistant to the President of Parke, Davis & Company, Detroit, Mich., was recently elected an affiliate of The Royal Society of Medicine, London, England.

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Dr. Leroy E. Burney, F.A.C.P., Surgeon General of the Public Health Service, U. S. Department of Health, Education and Welfare, Washington, D. C., recently announced the appointment of Dr. E. Cowles Andrus, F.A.C.P., Baltimore, Md., as a member of the National Advisory Heart Council. Dr. Andrus is an Associate Professor of Medicine and Chief of the Division of Cardiology, Department of Medicine at The Johns Hopkins University Medical School. He is also a former President of the American Heart Association and a former member of the Heart Council.

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Dr. F. S. Grégoire, (Associate), Montreal, Que., Can., discussed the subject, "Medical Treatment of 1,000 Cases of Asthma and Rhinitis," at the 91st Annual Meeting of the Canadian Medical Association which was held at Nova Scotia, Halifax, June 16-20, 1958.

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Dr. Stanley W. Olson, F.A.C.P., Dean of the Baylor University College of Medicine, Houston, Tex., was one of four physicians chosen on the basis of their "professional competence and Christian dedication" to serve as a team to visit clinics and hospitals throughout the world under the sponsorship of the Baptist World Alliance. The group left San Francisco on June 27, 1958, and will return in late



September, after having visited mission stations and medical centers in Hawaii, Japan, Korea, countries in the Middle East, Southern Asia, and Africa.

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Drs. W. Ford Connell, F.A.C.P., Professor of Medicine at Queen's University Faculty of Medicine, Kingston, Ont., Can., and F. S. Brien, F.A.C.P., Professor of Medicine at the University of Western Ontario Faculty of Medicine, London, Ont., Can., were elected Fellows of the Royal College of Physicians of London, recently.

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Dr. Ronald V. Christie, F.A.C.P., Chairman of the Department of Medicine, McGill University Faculty of Medicine, Montreal, Que., Can., served as Visiting Professor of Medicine at the University of Witwatersrand, Johannesburg, South Africa, during the months of June and July, 1958.

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Dr. J. S. L. Browne, F.A.C.P., Chairman of the Department of Investigative Medicine, McGill University Faculty of Medicine, Montreal, Que., Can., delivered the Litchfield Lecture at the Oxford University, England, on June 11, 1958.

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Dr. John G. Howlett, F.A.C.P., Assistant Professor of Medicine, McGill University Faculty of Medicine and Physician to the Royal Victoria Hospital, Montreal, Que., Can., was recently appointed Physician-in-Chief of the St. Mary's Hospital, Montreal.

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Dr. Donald M. Pillsbury, F.A.C.P., Professor and Chairman of the Department of Dermatology, University of Pennsylvania School of Medicine, Philadelphia, Pa., has been named President of the 12th International Congress of Dermatology to be held in Washington, D. C., 1962.

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Brigadier General Elbert DeCoursey, F.A.C.P., (MC) U. S. A., Commandant, Army Medical Service School, Fort Sam Houston, Tex., was elected Treasurer of the American Association of Pathologists and Bacteriologists and Chairman of the Executive Committee of the Board of Governors of the Southwest Foundation for Research and Education, recently.

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Lt. Colonel David L. Deutsch, F.A.C.P., (MC), U. S. A., Assistant Chief, Medical Service, Ireland Army Hospital, Fort Knox, Ky., recently reported at the Tripler Army Hospital, Honolulu, T. H., where he will become Chief of Gastroenterology.

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Lt. Colonel Jules J. McNerney, F.A.C.P. (MC), U. S. A., Chief, Medical Service, Ireland Army Hospital, Fort Knox, Ky., was a guest speaker at the Kentucky Food Conference, Louisville, Ky., and spoke on "Dietary Habits and Their Effect on National Security."

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Dr. Richard A. Kern, F.A.C.P., Philadelphia, Pa., past President of the American College of Physicians and Emeritus Professor of Medicine at Temple University School of Medicine, spent June 16-19 as Physician-in-Residence at the Veterans Administration Hospital, Lebanon, Pa. During this period, he lectured, conducted



teaching ward rounds, and held clinics for the staff and for visiting physicians of the Veterans Administration.

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Dr. John Donnelly, (Associate), Hartford, Conn., was a speaker at the meeting of the American Psychiatric Association, San Francisco, Calif., in June, 1958.

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Dr. Francis J. Braceland, F.A.C.P., Hartford, Conn., received an honorary degree from the Trinity College in Hartford, Conn., in June, 1958.

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Dr. Arthur M. Olsen, F.A.C.P., Professor of Medicine, University of Minnesota (Mayo Foundation), Rochester, Minn., served as the First Visiting Physician pro tem, at the Lovelace Foundation for Visiting Physicians and Surgeons pro tem, in Albuquerque, N. M., March 5-7, 1958.

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Dr. John H. Bland, F.A.C.P., Burlington, Vt., discussed the subject, "Water and Electrolyte Metabolism," at the 12th Community Nutrition Institute, sponsored by the Syracuse University, June 23-27, 1958.

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Dr. James A. Halstead, F.A.C.P., Director of Professional Services, Veterans Administration Hospital, and Associate Professor of Medicine, State University of New York Upstate Medical Center in Syracuse, New York, has received a Fulbright Award to serve as Visiting Professor of Medical Science at the University of Shiraz, Iran, for the academic year 1958-1959. Dr. Halstead has leave of absence from his position in the Veterans Administration, and will return there in June, 1959.

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Dr. Albert Abraham, F.A.C.P., Morristown, N. J., was elected President of the Morris County (N. J.) Medical Society, at a recent meeting of that organization.

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Dr. John C. Leonard, F.A.C.P., A.C.P. Governor for Connecticut, spoke before the New London County Medical Association, New London, Conn., June 5, 1958, on "Whither Medicine?"

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Dr. H. Corwin Hinshaw, Sr., F.A.C.P., Clinical Professor of Medicine, Stanford University School of Medicine, San Francisco, Calif., was a guest speaker at the 66th Annual Session of the Idaho State Medical Association, at Sun Valley, Idaho, July 6-9, 1958.

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Dr. Francis B. Carroll, F.A.C.P., Waban, Mass., Area Medical Director of the Veterans Administration Hospitals and Clinics for New England and New York, was the recipient of the Annual Distinguished Service Award, made by the Massachusetts Elks recently.

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At a recent meeting of the Medical Society of the State of New York, Dr. Walter P. Anderton, F.A.C.P., New York, N. Y., was re-elected Secretary, and Dr. Maurice J. Dattelbaum, F.A.C.P., Brooklyn, N. Y., Treasurer.

Dr. Robert S. Dow, F.A.C.P., Portland, Ore., was elected to the Executive Committee of the North Pacific Society of Neurology and Psychiatry, at a recent meeting of that organization.

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Dr. Sol Katz, F.A.C.P., Washington, D. C., recently received the first Edward Y. Davidson Award, for having submitted the best scientific paper published in the *Medical Annals of the District of Columbia*, during the year 1956.

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Dr. Walter G. Unglaub, (Associate), Associate Professor of Medicine at Tulane University School of Medicine, New Orleans, La., is visiting medical institutions in Colombia, South America, during a three-month tour as Consultant in Nutrition. The project is sponsored by the University of Tulane and the government of Colombia.

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OBITUARIES

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The College records with sorrow the deaths of the following members. Their obituaries will appear later in these columns.

- Dr. Edmond C. Alberton, (Associate), San Francisco, Calif., April 19, 1958  
Dr. William Antine, (Associate), Brooklyn, N. Y., June 24, 1958  
Dr. James Ian Baltz, F.A.C.P., Detroit, Mich., June 29, 1958  
Dr. David Mayo Berkman, F.A.C.P., Oronoco, Minn., May 28, 1958  
Dr. Harry Isaac Cramer, F.A.C.P., Montreal, Quebec, Can., June 4, 1958  
Dr. Carlyle Morris, F.A.C.P., Metuchen, N. J., April 10, 1958  
Dr. William Dennis Scanlan, Jr., F.A.C.P., New York, N. Y., May 8, 1958  
Dr. Henry Wallace, F.A.C.P., New York, N. Y., April 24, 1958
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## DR. LYMAN BRUCE CARRUTHERS

Dr. Lyman Bruce Carruthers, F.A.C.P., was born in Sarnia, Ontario, Canada, on April 6, 1903, and died there on November 19, 1957. He was the youngest of four brothers, all of whom became doctors. He took his B.A. and M.D. degrees at Queen's University, Kingston, Ontario, Canada, in 1926 and 1928, respectively. He served as Instructor in Preventive Medicine and Assistant in the Student Health Service at Cornell University Medical College from 1929-31.

He then went to India where he devoted himself to language study and medical education. He will be long remembered as the Dean of the Miraj Christian Medical School, Miraj, India, which was his main interest and chief responsibility during the years that he was in that country. He served that institution from 1932 to 1953. The number of students training at the institution increased from 39 when he became Dean, to 160 at the time of his retirement. For several years he was Editor of the *Journal of the Christian Medical Association of India, Burma and Ceylon*, which organization included 300 mission hospitals. Illness forced his retirement in 1953.

Dr. Carruthers was a member of the Christian Medical Association of India, Burma and Ceylon; Member, Royal College of Physicians (London); Fellow, Royal College of Physicians, Canada, and a Fellow of the American College of Physicians since 1938. He is survived by his wife, Mrs. Jeanne Hugo Carruthers and three children, 137 Wellington St., Sarnia, Ontario, Canada.

## DR. EARL BRADLEY ERSKINE

Dr. Earl Bradley Erskine, F.A.C.P., Chicago, Illinois, died on October 26, 1957. He was 67 years old. The cause of his death was coronary arteriosclerosis.

He was born in Tilden, Nebraska on October 10, 1890. He obtained his M.D. degree from the University of Nebraska College of Medicine in 1914. He had a most interesting career. His chief fields of endeavor were in hygiene, sanitation and in student health service work. Most of his active medical life was spent as a medical officer in the United States Navy. He was retired as a Commander in 1945. He spent some time as Physician at the Peiping Union Medical College, Peiping, China.

From 1946 to 1956 he was Professor of Hygiene and Sanitation at the University of Illinois and Director of the Student Health Service, University of Illinois, Chicago Undergraduate Division.

He was a member of the American College Health Association and was President of this organization in 1949. He was also a member of the American Medical

Association, the American Society of Clinical Pathologists, and the Tropical Medical Society. He was a Diplomate of the American Board of Preventive Medicine. He had been a Fellow of the American College of Physicians since 1938.

Dr. Erskine made many contributions to medicine and to society. He is survived by his widow, Mrs. Eleanor Erskine, 2616 Noyes Street, Evanston, Illinois.

WRIGHT ADAMS, F.A.C.P.,  
Governor for Northern Illinois

#### DR. CLAUDE LEE HOLLAND

Dr. Claude Lee Holland, F.A.C.P., of Fairmont, West Virginia, died at his home in that city on January 29, 1958, at the age of 79. He had been in bad health for over a year.

Dr. Holland was born at Uffington, West Virginia, January 18, 1879, the son of the late Charles H. and Susan Louisa (Price) Holland. He received his early education in rural schools and later attended Fairmont State Normal School and West Virginia University. He received his M.D. degree from the Maryland Medical College, Baltimore, in 1901 and served his internship at the Franklin Square Hospital in that city, 1901-02. He began practice in Fairmont in 1902 and, since 1921, limited his practice to the specialty of pediatrics.

He was a Member of the Staff of the Cook Hospital, Fairmont, and a Consultant to the Fairmont Emergency Hospital. He was a member of the Marion County Medical Society, the West Virginia State Medical Association, the American Medical Association and the Southern Medical Association.

Dr. Holland was the third physician in West Virginia to become a member of the American College of Physicians in 1923. He was a Diplomate of the American Board of Pediatrics.

He is survived by a daughter Mrs. Raleigh E. Stubbs of Charleston; a brother, Dr. Charles Holland, practicing dentistry in Morgantown, West Virginia, and two sisters, Ruby Holland of Morgantown, and Rose Holland of Michigan.

It is with deep regret we record the passing of one of the oldest members of the College in West Virginia.

PAUL H. REVERCOMB, M.D., F.A.C.P.,  
Governor for West Virginia

#### DR. THOMAS TALLMAN HOLT

Dr. Thomas Tallman Holt, F.A.C.P., Wichita, Kansas, aged 82, passed away on January 18, 1958, after an extended illness. He was born on July 8, 1875, near Uniontown, Kansas, the son of Judge and Mrs. James H. Holt. Following graduation from William Jewell College, he attended the University of Kansas School of Medicine, Kansas City, Kansas, and graduated in 1900.

From 1900 until 1922 he practiced medicine in Geuda Springs, Kansas, where he owned and operated a sanatorium. During these years Dr. Holt continued his studies with post graduate training at the New York Post Graduate and at the University of Vienna, Austria. In 1922 he moved to Wichita, Kansas, limiting his practice to Internal Medicine. He became the first member of the American College of Physicians in the State of Kansas in 1923, and was an enthusiastic and earnest worker in the activities of the College both in Kansas where he served as Governor until 1941, and nationally serving as Vice President in 1941. He was a member of the Sedgwick County Medical Society, the Kansas Medical Society, A.M.A., the American Heart Association, and the American Chemical Society. He was certified by the American Board of Internal Medicine in 1937.

Dr. Holt retired from active practice in 1950 because of his health. He is sur-

vived by his wife, Loma Dixon Holt, 3 Park Ave., Wichita, Kansas; a son, Dr. James H. Holt; and a daughter, Mrs. R. H. English.

Throughout his life, Dr. Holt was a fine, reserved, kindly, studious gentleman, deeply revered and respected by his colleagues and his patients.

FRED J. McEWEN, M.D., F.A.C.P.,  
Governor for Kansas, A.C.P.

#### DR. ISIDORE STANLEY KAHN

Dr. Isidore Stanley Kahn, F.A.C.P., of San Antonio, Texas, died in that city January 26, 1958, of complications of diverticulitis. He was born in Dallas on August 18, 1879.

He received preliminary education at Sacks Collegiate Institute, New York, a B.A. degree in 1900, from Harvard, Cambridge, Massachusetts, and an M.D. degree from Harvard Medical School, Boston, Massachusetts in 1904. He interned at the Boston City Hospital, and engaged in private practice in Dallas in 1905, later moving to Mexico, and to San Antonio in 1912. His special interest was allergy in which he was a pioneer in the Southwest and to which subject he contributed valuably of his observation in medical journals. Dr. Kahn served as a Major in the Army Medical Corps during World War I, and in the Tuberculosis Section of General Hospital No. 16, New Haven, Connecticut. He was Visiting Physician at the Nix Memorial Hospital and the Santa Rosa Hospital, San Antonio. He retired in 1953.

Dr. Kahn was a member of the American Medical Association, the Texas Medical Association, the Bexar County Medical Society, the American Association for the Study of Allergy, the Southwest Allergy Forum, the American Academy of Allergy, the National Tuberculosis Association, a Fellow of the American Academy of Allergy, and of the American College of Allergy. He was a Diplomate of the American Board of Internal Medicine, a Fellow of the American College of Physicians since 1927 and a Life member since 1948.

Dr. Kahn is survived by his widow, Mrs. Emma M. Kahn, Aurora Apartment Hotel, San Antonio.

VICTOR E. SCHULZE, M.D., F.A.C.P.,  
Governor for Texas, A.C.P.

#### DR. EDGAR F. KISER

Dr. Edgar F. Kiser, F.A.C.P., died January 23, 1958 in Indianapolis, Ind. Dr. Kiser was born in Union City, Indiana, in 1880, and was graduated from the Indiana University School of Medicine in 1903. Following an internship at the Indianapolis City Hospital, he served as Superintendent of the City Dispensary and practiced general medicine in Indianapolis until entering military service in World War I. Thereafter, he attended Harvard Medical School and the National Hospital of Diseases of the Heart in London. Upon his return to Indianapolis Dr. Kiser limited his practice to cardiology.

Dr. Kiser, a member of the faculty of Indiana University since 1915, ultimately became Associate Professor of Medicine and Clinical Professor of Cardiovascular Disease. Medical history interested him, and for many years he lectured on this subject to students at Indiana University School of Medicine. His efforts were responsible for the establishment in Indiana of a chapter of the American Association of Medical History.

He was a member of the American Medical Association, the Indiana State Medical Association, the Mississippi Valley Medical Society, and the Indianapolis Medical Society. He became a Fellow of the American College of Physicians in 1930 and a Life member in 1943.



Dr. Kiser found time to take an active part in civic and religious affairs. He played a prominent role in the B'Nai B'rith Lodge and in the Indianapolis Hebrew Congregation.

He is survived by his widow, Mrs. Cleone H. Kiser, 5610 Central Avenue, Indianapolis 20, Indiana, and by a daughter, Mrs. B. D. Rosenak.

Dr. Kiser never lost his desire for knowledge, and he stimulated many younger men to seek postgraduate medical education.

He was revered by his associates as a gentleman and a scholar.

KENNETH G. KOHLSTAEDT, M.D., F.A.C.P.,  
Governor for Indiana, A.C.P.

#### DR. LOUIS A. LEVISON

Dr. Louis A. Levison, F.A.C.P., died in St. Vincent's Hospital, Toledo, Ohio, on March 10, 1958, of hypertensive heart disease and terminal pneumonia. He was born in Toledo on July 16, 1880. He received a bachelor of science degree from the University of Michigan in 1900. His medical degree was awarded by the Medical School of the same University in 1903. After an internship and residency training at Lucas County Hospital, Toledo, he entered practice in Toledo in 1907. In 1918-19, he served as a Captain in the Medical Corps of the U. S. Army and was a Member of the Medical Staff of U. S. General Hospital, No. 9, at Lakewood, New Jersey.

Dr. Levison had been Consulting Physician at the St. Vincent's Hospital since 1920 and Senior Attending Physician at the Toledo Hospital since 1925. During World War II, from 1940 until 1947, he served on the Medical Advisory Board of the Ohio Selective Service.

Dr. Levison was a member of numerous professional societies, including the Ohio State Medical Association, the American Medical Association, the Tri-State Medical Society, the American Association of Immunologists, the American Heart Association, the American Diabetes Association, and the Mississippi Valley Medical Association. He was a Diplomate of the American Board of Internal Medicine and became a Fellow of the American College of Physicians in 1919.

Dr. Levison is survived by his wife, Mrs. Edith B. Levison, 2803 Emmick Road, Toledo, Ohio. To her, his colleagues in the College extend their sincere sympathy.

A. CARLTON ERNSTENE, M.D., F.A.C.P.,  
Governor for Ohio

#### DR. FLOYD ADDISON LOOP

Dr. Floyd Addison Loop, F.A.C.P., age 82, died March 10, 1958 in Lafayette, Indiana.

He was born in Duke Center, Pennsylvania. He received his M.D. degree from George Washington University, Washington, D. C., in 1910. He served his internship at St. Elizabeth's Hospital, Lafayette, Indiana, and was an internist for the Wabash Valley Sanitarium until 1916. Dr. Loop was Roentgenologist at the Home Hospital, Lafayette, from 1916-1930.

Dr. Loop was a member of the Tippecanoe County Medical Society, the Indiana State Medical Association, and the American Medical Association. He was elected to Fellowship in the American College of Physicians in 1922.

Dr. Loop was in practice with his son, Dr. Fredrick A. Loop, who is a general surgeon in Lafayette. He is also survived by his wife, the former Marie Dorullis, 633 Central Avenue, a son, Floyd D. Loop, who plans to enter George Washington University School of Medicine in the fall of 1958, and a daughter, Mrs. Milton Popp of Fort Wayne, Indiana.

Until his retirement five years ago Dr. Loop was very active in local and state medical groups.

Conferees note with sincere regret the passing of Dr. Loop.

KENNETH G. KOHLSTAEDT, M.D., F.A.C.P.,  
Governor for Indiana, A.C.P.

#### DR. WILLIAM FREDERICK LORENZ

Dr. William F. Lorenz, F.A.C.P., Emeritus Professor of Psychiatry at the University of Wisconsin Medical School, was born in New York City on February 15, 1882, and died in Gordon, Wisconsin on February 18, 1958, after a long, colorful, and distinguished career.

He received his medical education at New York University College of Medicine and was graduated with an M.D. degree in 1903. His clinical and postgraduate training was completed at the New York Psychiatric Institute and the Manhattan State Hospital between 1905 and 1908. In 1908 he served as Neuropathologist with Dr. Adolf Meyer. In 1909 he became Clinical Director of the Mendota State Hospital and a member of the faculty of the University of Wisconsin Medical School.

He soon created a laboratory with investigative facilities for the recognition and study of syphilis in relation to mental diseases and stimulated cooperative research programs with the medical school faculty. The laboratory grew rapidly and in 1915 it became the Wisconsin Psychiatric Institute. It was designed for the scientific and particularly biochemical study of mental diseases, and he served as Director continuously until 1955. From this background came the drugs Tryparsamide (with Dr. A. S. Loevenhart) for the treatment of neurosyphilis and Sodium Amytal for the study of psychodynamics, extensive studies of nutrition and metabolism in mental diseases, and some of the earliest studies of oxygen requirements of the central nervous system.

He spent the year 1914 on leave with the U. S. Public Health Service, studying the mental aspects of pellagra. In 1925 the Wisconsin Psychiatric Institute was moved to the University campus, and Dr. Lorenz was made Professor and Head of the Department of Neuropsychiatry in the Medical School. With other members of the faculty, he contributed greatly to the expansion of the school to a four-year program. He labored untiringly for the improvement and coordination of facilities for the study and care of the mentally ill and was a pioneer in the development of the biochemical approach to mental disease. His many contributions in the latter field have done much to provide the background for the extensive investigations that are in progress at the present time.

Dr. Lorenz was a member of the American, State, and County Medical Associations, the American Psychiatric Association, the Association for Research in Nervous and Mental Diseases, the Central Psychiatric Society, Milwaukee Neuropsychiatric Society, and the Chicago Medical Society (Honorary). He was a Diplomate of the American Board of Psychiatry and Neurology and a Fellow of the American College of Physicians, 1928. He was awarded the Distinguished Service Medal for his military service in World War I and was active in Veterans' organizations for many years.

He is survived by his wife and three sons. He has left to them and to his medical colleagues the rich heritage of the accomplishments of a dynamic and creative physician who devoted his life unselfishly to the social and scientific aspects of medicine.

F. W. MADISON, M.D., F.A.C.P.,  
Governor for Wisconsin

## DR. PETER MILTON MATTILL

Dr. Peter M. Mattill, F.A.C.P., Assistant Superintendent, Associate Medical Director of Glen Lake Sanatorium, Oak Terrace, Minnesota, died January 12, 1958. The cause of his death was mesenchymoma, retroperitoneal.

Dr. Mattill was born in O'Daniel, Texas on October 26, 1887. He received his B.S. degree from North Central College, Naperville, Illinois, in 1912; his M.D. degree in 1919 from Rush Medical College, Chicago, Illinois, followed by an internship at Presbyterian Hospital, Chicago, Illinois. He practiced medicine in Hibbing and Chisholm, Minnesota.

In 1924 he accepted a position as Resident Physician at the Glen Lake Sanatorium and, in 1938, became Assistant Superintendent and Associate Medical Director. He was Clinical Assistant in the Department of Medicine, University of Minnesota School of Medicine from 1927 to 1942, and Instructor in Tuberculosis, University of Minnesota School of Nursing since 1946.

Dr. Mattill served on many boards and committees. During 1952 to 1953, he was President of the Minnesota Trudeau Society, and was on the Board of Directors of the Hennepin County Tuberculosis Association for many years. An excellent teacher, he will be remembered by his pupils for many years to come.

His society memberships included the American Medical Association, the Minnesota State Medical Association, the Hennepin County Medical Society, the Minnesota Trudeau Society and the American Trudeau Society. He was a member of Sigma Xi and Phi Chi fraternities. He was elected a Fellow of the American College of Physicians in 1929; a Diplomate of the American Board of Internal Medicine since 1937. He was a member of Gethsemane Lutheran Church, Hopkins, Minnesota, and a member of the Glen Lake Public School Board.

Dr. Mattill will be missed particularly for his fellowship, his kindness, and for his counsel. He will long be remembered for his quiet, unassuming cooperation and his human interest in his patients, his colleagues, employees at the Sanatorium, as well as by the neighbors in the community.

He is survived by his widow, Mrs. Nora A. Mattill, Oak Terrace, Minnesota, four daughters and three brothers.

## DR. L. MARY MOENCH

Dr. L. Mary Moench, F.A.C.P., was born September 30, 1891, New York, New York, and died on March 27, 1958, of carcinoma.

Dr. Moench received her degree of Bachelor of Arts at Wellesley College in 1914, the degree of Doctor of Medicine at The John Hopkins University School of Medicine in 1919, and a Master of Science degree at the Mayo Foundation, University of Minnesota School of Medicine in 1923.

Her hospital appointments were as follows: Instructor in Medicine, Mayo Foundation, University of Minnesota School of Medicine, 1925-34; Associate in Medicine, Mayo Clinic, Rochester, Minnesota, 1925-34; Instructor in Medicine, Cornell University Medical College since 1937. She was on the staff of the White Plains Hospital and New York, Manhattan Hospital.

She was a member of the following: the American Medical Association; the Medical Society of the State of New York; the New York County Medical Society; the American Heart Association; a Fellow of the American College of Physicians since 1938, and a Life Member since 1952.

Dr. Moench wrote extensively, many articles appearing in the leading state and national medical journals.

Dr. Moench is survived by two sisters, Mrs. Roland W. Porter of Newton,

Pennsylvania, and Mrs. Richard Thornbury of North Collins, New York. It is with sad regret her loss is recorded.

IRVING S. WRIGHT, M.D., F.A.C.P.,  
Governor, Eastern Division, New York State

#### DR. HENRY MONROE MOSES

Dr. Henry Monroe Moses, F.A.C.P., was born February 17, 1875, Brooklyn, New York and died on January 11, 1958, of congestive heart failure.

Dr. Moses received his A.M. degree at Amherst College, Amherst, Massachusetts, in 1900 and his degree of Doctor of Medicine at Long Island College Hospital in 1904.

His hospital appointments were as follows: Clinical Professor of Medicine Emeritus, State University of New York College of Medicine at New York City, retiring in 1940; Consulting Physician: Kings County; Brooklyn Cancer Institute; Con Edison; Wyckoff Heights and Huntington Hospitals. He was a Lieutenant Colonel, (MC) U. S. Army from 1917-19.

He was a member of the following: the American Medical Association; the Medical Society of the County of Kings; the Medical Association of the Greater City of New York; the Brooklyn Society of International Medicine (President 1938-39); the Brooklyn Medical Association; a Fellow of the American College of Physicians, 1919, Life Member, 1946. He was a Diplomate of the American Board of Internal Medicine.

Dr. Moses is survived by a son, Mr. Richard Moses, 109 Rutland Rd., Brooklyn. His confreres note with sincere regret the passing of Dr. Moses.

IRVING S. WRIGHT, M.D., F.A.C.P.,  
Governor, Eastern Division, New York State

#### REAR ADMIRAL PERCEVAL SHERER ROSSITER, (MC), USN, Retired

Dr. Perceval Sherer Rossiter, F.A.C.P., was born in Shepardstown, West Virginia, on November 30, 1874. He was graduated from the University of Maryland School of Medicine with the degree of Doctor of Medicine in 1895. At the outbreak of the Spanish-American War in 1898 he enlisted in the U. S. Army, and after service in Cuba served in the Philippine Islands during the insurrection, returning to the United States in 1902. He was appointed Acting Surgeon in the U. S. Navy on January 20, 1903. Through subsequent promotions he attained the rank of Captain in the Medical Corps of the Navy, effective June 5, 1924. Appointed Surgeon General of the Navy and Chief of the Bureau of Medicine and Surgery, Navy Department, on May 17, 1933, he was reappointed on March 17, 1937, and served until December 1, 1938, when he was transferred to the Retired List of the Navy.

After completing the course in Naval and Tropical Medicine at the Naval Medical School, Washington, D. C., he went to Honolulu, T. H., for his first period of Naval service. Upon his return to the United States in the summer of 1906, he reported for duty at the Naval Academy, Annapolis, Maryland. After two years in that assignment he was sent to Tutuila, Samoa, to serve at the Naval Station until June, 1910. He then returned home, and was soon ordered to the *USS Independence*, at the Navy Yard, Mare Island, California. He joined that vessel, and had a year as her Medical Officer before reporting for a tour of shore duty at the Naval Hospital, Puget Sound, Washington.



Duty afloat aboard the *USS California* and the *USS San Diego*, on Pacific Station, was followed by shore duty at the Naval Training Station, San Francisco in 1916-1917. He remained there as Senior Medical Officer and Medical Inspector throughout most of the World War I period, and in October, 1918, was sent to Base Hospital #2. Early in 1919 he joined the *USS Huntington*, and later served as Medical Officer of the *USS Cap Finisterre*, of the Transport Force and the *USS Idaho*, a unit of Battleship Squadron 4, Pacific Fleet.

In September, 1920, he reported to the Second Advanced Base Force, Marines, at San Diego, California, where he served as Medical Officer until January, 1922. From February 6 until December 8, the same year he was Chief of the Personnel Division in the Bureau of Medicine and Surgery, Navy Department. He left Washington in 1923 with the U. S. Naval Mission to Brazil, and served as Medical Member of the mission until August, 1926. He was then assigned to the Naval Medical Supply Depot, Brooklyn, New York, as Executive Officer, and in March, 1927, was transferred to similar duty at the Naval Hospital, Chelsea, Massachusetts.

Late in 1927 he became Executive Officer of the Naval Hospital, Brooklyn, New York, and from the summer of 1929 until his detachment in December, 1931, he was Medical Officer in Command. In January, 1932, he reported as Medical Officer in Command, Naval Hospital, Washington, D. C., serving as such until his appointment as Surgeon General and Chief of the Bureau of Medicine and Surgery, in the rank of Rear Admiral, in March, 1933. In 1934 he made a long cruise with the U. S. Fleet, the first time a Surgeon General ever accompanied the Fleet on extensive maneuvers. He was reappointed Surgeon General in 1937, to serve until statutory retirement age, because of his familiarity with the project of building the Naval Medical Center and the new Naval Hospital, in Bethesda, Maryland.

Upon his retirement on December 1, 1938, Secretary of the Navy Claude A. Swanson congratulated him upon his thirty-five years of service in the Navy, part of which were served in the highest post in the Medical Corps. The letter, quoted in part, follows:

"... The Department regrets your retirement from active service and takes this occasion to extend to you its heartiest congratulations and appreciation for your long and distinguished service to our Nation. During the time which you have so faithfully and efficiently served, you have witnessed many advancements in the morale, strength and efficiency of the Navy; and you have the satisfaction of knowing that you have contributed to the accomplishment of these results. May I wish for you continued success and many years of health and happiness. . . ."

Rear Admiral Rossiter was a Fellow of the American Medical Association; the American College of Surgeons, and the Association of Military Surgeons. He was President of the Association of Military Surgeons from October, 1937, to October, 1938. He has the Mexican Service Medal and the World War I Victory Medal with Transport Clasp. He was named a Fellow of the American College of Physicians in 1933 and served as Governor, A.C.P., for the Navy from 1934-1939.

After retirement Rear Admiral Rossiter made his home in Santa Barbara, California, where he was the President and Director of the Blood Bank.

Rear Admiral Rossiter died at his home in Santa Barbara, California, on December 20, 1957. He was 83 years old. He is survived by his daughter, Miss Ernestine S. Rossiter, 1595 San Leandro Lane, Santa Barbara, California.

REAR ADMIRAL B. W. HOGAN, F.A.C.P., (MC), USN  
Governor for Navy



## DR. DAVID ANDREW TUCKER, JR.

Dr. David Andrew Tucker, Jr., F.A.C.P., died in the Christian R. Holmes Hospital, Cincinnati, Ohio, on June 3, 1958, of multiple myeloma. He was born near Greensburg, Indiana, on December 21, 1890. In 1909 he received the A.B. degree from the University of Chicago, and in 1914 the degree of Master of Arts from the University of Michigan. His medical degree was awarded by the University of Cincinnati College of Medicine in 1916. After an internship at Christ Hospital, Cincinnati, he entered the Medical Corps of the U. S. Army and served as a Captain in France.

In 1919 he entered practice in Cincinnati and became a Member of the Staff of the Christ Hospital and Consulting Physician in the Department of Contagious Diseases of the Cincinnati General Hospital. He was appointed Assistant to the Dean of the University of Cincinnati College of Medicine in 1928, and Professor of the History of Medicine in 1935. He held both of these positions until the time of his death. From 1928 until 1957 he was Senior Attending Physician at Christ Hospital.

Dr. Tucker was a member of the American Medical Association and the Ohio State Medical Association, and was a Past-President of the Cincinnati Academy of Medicine. He became a Fellow of the American College of Physicians in 1928 and a Life Member in 1955. He was a Diplomate of the American Board of Internal Medicine. He was also a noted medical historian and a member of the History of Science Society, the American Association for the History of Medicine, the Ohio Academy for the History of Medicine, and the Ohio Historical and Philosophical Society. His collection of books pertaining to the history of medicine numbered more than one thousand volumes and is to go to the library of the University of Cincinnati College of Medicine. His extensive general medical library was left to the McCullough Hyde Memorial Hospital of Oxford, Ohio.

Dr. Tucker is survived by his wife, Mrs. Mary Louise Tucker, 3518 Bayard Drive, Cincinnati 8, and two sons, David A. Tucker III and Wilson R. Tucker, M.D. To them, his colleagues in the College extend their sincere sympathy.

A. CARLTON ERNSTENE, M.D., F.A.C.P.,  
Governor for Ohio

## DR. WILLIAM C. WALKER

Dr. William C. Walker, F.A.C.P., died at his home in Salt Lake City on February 15, 1958, at the age of 56. Dr. Walker was born August 6, 1901, at Sevierville, Tennessee. He received his medical degree from the University of Tennessee College of Medicine in 1929 and his Utah license in 1930. He was a member and former President of the Staff at the Holy Cross Hospital in Salt Lake City.

He was a member of the Utah State Medical Association, the American Medical Association, the American College of Chest Physicians, and Beta Kappa Psi Medical Fraternity. He was named a Fellow of the American College of Physicians in 1941. He was a Master Mason in the Kaibab Lodge and a member of the Episcopal Church.

Dr. Walker's wife died in 1955. His immediate survivor is his daughter, Joan of Salt Lake City. Four brothers and a sister also survive.

Dr. Walker was noted for his kindly, sympathetic manner and for being an outstanding, capable internist in the Salt Lake area. His passing is noted with sincere regret by thousands of friends and the Medical Fraternity in this area.

T. C. BAUERLEIN, M.D., F.A.C.P.,  
A.C.P. Governor for Utah

## DR. RANDALL ALLEN WHINNERY

Dr. Randall Allen Whinnery, F.A.C.P., of Detroit, Michigan, was born on August 29, 1911, in Waukegan, Illinois, and died on May 27, 1958, at Jennings Hospital, Detroit, Michigan, of staphylococcus septicemia and Hodgkin's disease.

He received his B.A. degree from the University of Iowa in 1933 and his M.D. degree from the same University in 1938. He then served eighteen months of rotating internship at the Maine General Hospital in Portland, Maine, and was a Resident in Internal Medicine at the Harper Hospital in Detroit, Michigan, from 1940 to 1942. From 1942 to 1944, he held an assistantship to Dr. Hugo A. Freund, Dr. A. Hazen Price and Dr. Warren B. Cooksey of Detroit.

Dr. Whinnery obtained postgraduate training in electrocardiography at Michael Reese Hospital in Chicago in 1945, and, subsequently, became assistant physician in the Division of Internal Medicine at Harper Hospital, as well as senior physician on the active staff in the Department of Internal Medicine at Florence Crittenton Hospital, Detroit. He was, likewise, Assistant Chief of Staff at the McGregor Center Hospital for Rehabilitation and Health Education.

Dr. Whinnery held membership in the following medical organizations: the American Medical Association, the Michigan State Medical Society, the Wayne County Medical Society, the Detroit Heart Club, the American Heart Association, and was a Fellow of the American College of Physicians since 1949. He was, likewise, a Diplomate of the American Board of Internal Medicine.

Dr. Whinnery demonstrated a very keen interest in the problems of convalescence and rehabilitative medicine and showed a fine capacity to deal with psychosomatic illnesses. He also was a part of the electrocardiographic team at Crittenton Hospital and served a number of years on the Detroit Board of Education's school health program.

He is survived by his wife, Jessita G. Whinnery, and one son, Randall Allen Whinnery, Jr., both at 721 Balfour, Grosse Pointe Park, Michigan.

WARREN B. COOKSEY, M.D., F.A.C.P.,  
Detroit, Michigan

## CAPTAIN MARION TWITTY YATES, MC, U.S.N.

Captain Marion Twitty Yates, Medical Corps, U. S. Navy, died in Miami, Florida, on December 14, 1957, at the age of 48. At the time of his death Captain Yates was assigned to duty at the Marine Corps Air Station, Miami, Florida.

Born in Darlington, South Carolina, on May 7, 1909, Captain Yates was graduated from the University of South Carolina and received the degree of Doctor of Medicine from the Medical College of the State of South Carolina. He had internship training at the U. S. Public Health Service, U. S. Marine Hospital, Chicago, Illinois, from 1935 to 1936. Commissioned a Lieutenant (junior grade) in the Medical Corps of the U. S. Navy on January 17, 1937, he subsequently attained the rank of Captain to date from January 1, 1952.

During the early months of World War II, Captain Yates served at the Navy Yard, Charleston, South Carolina, as Industrial Medicine Officer. In January 1943 he joined the *U.S.S. Achernar* and participated in convoy and transportation operations in the Atlantic Area, and in the Invasions of Normandy and Southern France. Following World War II, he served at various Navy Medical Department activities throughout the United States and in ships of the fleet. During the Korean Conflict he served as Chief of Medicine aboard the hospital ship *U.S.S. Repose* during operations against North Koreans and Chinese Communist forces, under the United Nations' Command. He served as Chief of Medicine at the Naval Hospital, Camp

Lejeune, North Carolina, from July, 1952 until December, 1954 and, prior to being transferred to the Marine Corps Air Station, Miami, Florida, was assigned to the Naval Hospital, Portsmouth, Virginia.

Captain Yates received Letters of Commendation, with ribbon and combat "V" for service during both World War II and the Korean Conflict, and was entitled to the Navy Commendation Ribbon with star. In addition, he had the American Defense Service Medal; European-African-Middle Eastern Campaign Medal with two operation stars; the American Campaign Medal; World War II Victory Medal; the National Defense Service Medal; Korean Service Medal with silver star (five engagements); the United Nations Service Medal; and the Purple Heart Medal for wounds received in action.

Captain Yates was a member of the American Medical Association and an Associate of the American College of Physicians.

He is survived by his wife, the former Betty Stouder of Fort Wayne, Indiana, and four sons: John M., James D., Stephen L., and Samuel J. Yates.

B. W. HOGAN, Rear Admiral (MC) USN,  
A.C.P. Governor for U. S. Navy

## COLLEGE NEWS NOTES

### NEW LIFE MEMBERS

The College acknowledges with pleasure the following new Life Members:

Dr. Mendel Jacobi, Brooklyn, N. Y.  
Dr. George Milton Knowles, Hackensack, N. J.  
Dr. Henry Blum Nachtigall, New York, N. Y.

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### BOOKS DONATED TO THE COLLEGE LIBRARY OF PUBLICATIONS BY MEMBERS

The College gratefully acknowledges receipt of the following books from members of the College to the Memorial Library of Publications by Members of the College:

W. A. D. Anderson, M.D., F.A.C.P., Coral Gables, Fla., *PATHOLOGY* (third edition), published by The C. V. Mosby Co., 1957, St. Louis, Mo., 1957, 1402 pages and *SYNOPSIS OF PATHOLOGY* (fourth edition), published by The C. V. Mosby Co., 1957, 829 pages.

T. S. Danowski, M.D., F.A.C.P., Pittsburgh, Pa., *DIABETES AS A WAY OF LIFE*, published by Coward-McCann, Inc., New York, N. Y., 1957, 177 pages.

Hugh Rodman Leavell, M.D., F.A.C.P., Boston, Mass., and E. Gurney Clark, M.D., F.A.C.P., New York, N. Y., *PREVENTIVE MEDICINE FOR THE DOCTOR IN HIS COMMUNITY* (second edition), published by The Blakiston Division, McGraw-Hill Book Co., Inc., New York, Toronto, and London, 1958, 629 pages.

James Howard Means, M.D., F.A.C.P., Boston, Mass., *WARD 4: THE MAL-LINCKRODT RESEARCH WARD OF THE MASSACHUSETTS GENERAL HOSPITAL*, published by Harvard University Press, Cambridge, Mass., 1958, 187 pages.

Walter Modell, M.D., F.A.C.P., New York, N. Y., *DRUGS OF CHOICE 1958-1959*, published by The C. V. Mosby Co., St. Louis, Mo., 1958, 931 pages.

Heinrich Necheles, M.D., F.A.C.P., and Martin M. Kirshen, M.D., F.A.C.P., Chicago, Ill., *THE PHYSIOLOGIC BASIS OF GASTROINTESTINAL THERAPY*, published by Grune & Stratton, New York and London, 1957, 330 pages.

Howard A. Rusk, M.D., F.A.C.P., New York, N. Y., *CARDIOVASCULAR REHABILITATION*, published by The Blakiston Division, McGraw-Hill Book Company, Inc., New York, Toronto, London, 1957, 155 pages. Co-editors, Paul Dudley White, M.D., M.A.C.P., Bryan Williams, M.D., and Philip R. Lee, M.D.

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### MEETING OF COMMITTEES AND BOARD OF REGENTS, A.C.P.

Standing Committees and the Board of Regents will hold their regular autumn meetings at the College Headquarters in Philadelphia, November 13-15, 1958. Receipt of proposals for membership for action at these meetings closed on September 13, 1958. The succeeding meetings of the Committee on Credentials are scheduled for March 20-22 and April 17-18, 1959.

## COMING REGIONAL MEETINGS

State	City	Date	Governor(s)	Official Guest(s)
Arizona	Phoenix	October 18, 1958	William R. Hewitt	Fuller B. Bailey, Regent
Arkansas-Oklahoma	Hot Springs, Ark.	October 18, 1958	John N. Compton	Dwight L. Wilbur, President
Kentucky-Tennessee	Louisville, Ky.	October 18, 1958	Sam A. Overstreet Rudolph H. Kampmeier	Charles A. Doan, 1st Vice President
District of Columbia-Maryland	Washington, D. C.	November 1, 1958	Theodore J. Abernethy R. Carmichael Tilghman	E. R. Loveland, Exec. Sec.
Eastern Canada and New England States (New Brunswick, Newfoundland, Nova Scotia, Ontario, Quebec, Conn., Maine, Mass., N. H., R. I., Vt.)	Quebec, P.Q., Can.	November 7-8, 1958	Walter deM. Scriver	Dwight L. Wilbur, President E. R. Loveland, Exec. Sec.
New Jersey	Newark	November 12, 1958	Edward C. Klein, Jr.	Dwight L. Wilbur, President
North Carolina	Winston-Salem	December 4, 1958	Elbert L. Persons	E. R. Loveland, Exec. Sec.
Puerto Rico	San Juan	December 20, 1958	Frederico Hernandez-Morales	Robert Wilson, Regent
Colorado	Colorado Springs	January 16-17, 1959	Constantine F. Kemper	Dwight L. Wilbur, President
Ohio	Cincinnati	January 22, 1959	A. Carlton Ernstene	Dwight L. Wilbur, President
Eastern Pennsylvania	Philadelphia	January 23, 1959	William A. Jeffers	Dwight L. Wilbur, President
Southern California	Palm Springs	February 7-8, 1959	George C. Griffith	Dwight L. Wilbur, President
Nebraska	Omaha	March 7, 1959	Edmond M. Walsh	Dwight L. Wilbur, President
Kansas	Wichita	March 20, 1959	Fred J. McEwen	Dwight L. Wilbur, President



## SCHEDULE OF FUTURE EXAMINATIONS OF AMERICAN SPECIALTY BOARDS

American Board of Internal Medicine—William A. Werrell, M.D., Executive Secretary-Treasurer, 1 West Main St., Madison, Wis.

Oral examinations, February 3-6, 1959, New Orleans, La.; April 15-18, 1959, Chicago, Ill.; September 9-12, 1959, Portland, Ore., and November 6-7 and 9-10, 1959, Boston, Mass.

Written examinations, October 19, 1959.

Gastroenterology—April 17-18, 1959, Philadelphia, Pa.

The American Board of Pediatrics—John McK. Mitchell, M.D., Executive Secretary, 6 Cushman Rd., Rosemont, Pa.

Oral examinations, December 5-7, 1958, New York, N. Y.

The American Board of Physical Medicine and Rehabilitation—Earl C. Elkins, M.D., Secretary, 200 1st St., S.W., Rochester, Minn.

Examination, June 12-13, 1959, Philadelphia, Pa.

The American Board of Preventive Medicine—Tom F. Whayne, M.D., Assistant Secretary-Treasurer, University of Pennsylvania, Philadelphia 4, Pa.

Aviation Medicine, April 24-26, 1959, Los Angeles, Calif.

Occupational Medicine, April 17-19, 1959, Chicago, Ill.

Public Health, April 9-11, 1959, regional basis at the various Schools of Public Health.

American Board of Psychiatry and Neurology—David A. Boyd, Jr., M.D., Secretary-Treasurer, 102-110 Second Ave., S.W., Rochester, Minn.

Examinations, December 15-16, 1958, New York, N. Y.; March 16-17, 1959, New Orleans, La.

The American Board of Radiology—H. Dabney Kerr, M.D., Secretary, Kohler Hotel Bldg., Rochester, Minn.

Nuclear Medicine, December 6, 1958, Washington, D. C.

Special examination, March 16-19, 1959, Cincinnati, Ohio.

## RESEARCH FELLOWSHIPS

A program for senior and junior research fellowships has been established by the University of Rochester School of Medicine and Dentistry, Rochester, N. Y. Senior fellowships provide a basic stipend of \$5,500 to \$8,000 per year, with an additional \$350 per year provided for each dependent. These awards are available to medical graduates who have held a junior fellowship for two or three years or who have had comparable experience. The junior fellowships are available to medical graduates who have completed at least one year of internship or equivalent training. Stipends are \$4,500 to \$6,000 per year, with provision of \$350 per year for each dependent. Research experience is not required, but the junior fellows are required to devote 90% of their time in research or in advance study in preparation for research. For information write Dr. Lawrence E. Young, Chairman, Committee on Buswell Fellowships, University of Rochester Medical Center, 260 Crittenden Blvd., Rochester 20, N. Y.

AMERICAN TRUDEAU SOCIETY AND NATIONAL TUBERCULOSIS  
ASSOCIATION FELLOWSHIPS

The Medical Section of the National Tuberculosis Association, the American Trudeau Society, provides a limited number of fellowships to promote the training

of clinicians, medical teachers and scientific investigators in the field of tuberculosis and respiratory diseases. Awards are open to citizens of the United States for work within this country.

Candidates holding the degree of M.D. are eligible for awards making possible continuation of graduate study in the field of respiratory diseases in an approved hospital or medical center. Such studies may be oriented toward teaching or research. Residency in an approved hospital under such a fellowship will be credited by the American Board of Internal Medicine toward certification in internal medicine and pulmonary diseases. Each applicant must have the approval of the head of the department under whom he expects to work. All awards are determined by individual circumstances and are paid directly to the Fellow on a quarterly basis. Fellowships are granted for one year and applications must be received by December 1, 1958. Appointments may begin on any date at the convenience of the applicant.

A few fellowships at a higher level of training and award are offered to especially qualified candidates with an M.D. degree who have been assured of a continued teaching or research appointment upon completion of training. These Fellowships are awarded for one year but may be renewed up to a total period of four years.

Further particulars concerning fellowships may be obtained from The Director of Medical Education, American Trudeau Society, c/o The Henry Phipps Institute, 7th and Lombard Sts., Philadelphia 47, Pa.

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#### MARY PUTNAM JACOBI FELLOWSHIP

The Women's Medical Association of the City of New York offers the Mary Putnam Jacobi Fellowship to a graduate woman physician, either American or foreign. This Fellowship will start October 1, 1959, and will amount to \$2,000, with \$1,000 being available on October 1, 1959. The recipient of the Fellowship will be expected to make a report to the Committee at the end of the fourth month, following which, the second \$1,000 will be awarded subject to the approval of the Committee. The Fellowship is given for medical research, clinical investigation or postgraduate study in a special field of medicine. The recipient is expected to devote full time to the Fellowship, but exception may be made by the Committee under special circumstances.

Applications for this Fellowship may be obtained from the Secretary of the Committee. It must be returned before February 1, 1959, with the following information: (1) curriculum vitae; (2) a statement from a physician of a recent physical examination; (3) transcripts of her college and medical school records; (4) personal letters of recommendation from two or more physicians under whom she has studied; (5) a statement by the applicant of the problems she proposes to investigate or the study she plans to undertake; (6) a statement from the person under whom she proposes to study of his or her interest in her subject; (7) a recent photograph. Successful candidate will be notified not later than May 1, 1959. For information write: Dr. Ada Chree Reid, Secretary, 118 Riverside Dr., New York 24, N. Y.

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#### POSTGRADUATE COURSES ON DISEASES OF THE CHEST

The American College of Chest Physicians has scheduled the following two Courses, for each of which the tuition fee is \$100.00. Address the Executive Director, 112 E. Chestnut Street, Chicago, Ill. (1) CLINICAL CARDIOPULMONARY PHYSIOLOGY, Edgewater Beach Hotel, Chicago, Ill., October 13-17, 1958; (2) DISEASES OF THE CHEST, Park-Sheraton Hotel, New York City, November 10-14, 1958.

### 26TH ANNUAL SESSIONS OF THE OMAHA MID-WEST CLINICAL SOCIETY

The 26th Annual Sessions of the Omaha Mid-West Clinical Society will be held at the Sheraton-Fontenelle Hotel, Omaha, Nebr., November 3-6, 1958. The Sessions are under the joint sponsorship of the Creighton University School of Medicine, the University of Nebraska College of Medicine and the Omaha Mid-West Clinical Society, and are designated as a part of each school's official postgraduate educational program. The program will consist of panel presentations by members of the Society. The subjects to be discussed are: "Staphylococcus Infections"; "Obstetrical Shock"; "Common Fractures"; and "This—Is What's New!". Address inquiries to Dr. John H. Brush, Director of Clinics, Omaha Mid-West Clinical Society, 1031 Medical Arts Bldg., Omaha, Nebr.

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### AMERICAN ACADEMY OF GENERAL PRACTICE ANNOUNCES FUTURE MEETING DATES

The American Academy of General Practice recently announced the following dates and locations for future meetings: 1959—April 6-9, San Francisco, Calif.; 1960—March 20-24, Philadelphia, Pa.; 1961—April 17-20, Miami Beach, Fla.

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### NATIONAL CONFERENCE ON AIR POLLUTION

Dr. Leroy E. Burney, F.A.C.P., Surgeon General, Department of Health, Education and Welfare, Public Health Service, Washington, D. C., recently announced the dates for the National Conference on Air Pollution which will be held at the Sheraton-Park Hotel, Washington, D. C., November 18-20, 1958. The purpose of the Conference is to provide an opportunity for representatives of governmental bodies, industries, and voluntary organizations to discuss the ever-increasing problem of air pollution.

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### WORLD MEDICAL ASSOCIATION MEETING

Physicians representing 53 nations of the free world assembled at Copenhagen, Denmark, for the 12th General Assembly of The World Medical Association on August 15-20, 1958. Dr. Louis H. Bauer, F.A.C.P., New York, N. Y., Secretary-General of The World Medical Association, reported that the program was the most comprehensive of any in the history of the organization. A special feature was the presentation of a series of outstanding medical motion pictures. Included among these films was one entitled "Human Gastric Function," developed by Dr. Stewart G. Wolf, Jr., F.A.C.P., Professor of Medicine, University of Oklahoma School of Medicine, Oklahoma City, Okla. In addition to the special scientific sessions there were reports on medical education, medical ethics, medico-social affairs and international liaison.

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### NATIONAL FOUNDATION FOR INFANTILE PARALYSIS REORGANIZES

The National Foundation for Infantile Paralysis has dropped the reference to a specific disease and its new title will be "The National Foundation." The new objectives will be research and eventually a patient aid program in arthritis and congenital malformations. Virus research will be continued and expanded as will the investigations currently being conducted into the disorders of the central nervous system.

A new program was adopted after five years of exhaustive investigation of areas of need in the health field and a careful assessment of the strength of the National

Foundation that could be applied to other problems. The announcement regarding the revised objectives of the Foundation was made by Mr. Basil O'Connor, who has served as President of the organization since its inception in 1938.

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#### MEETING OF THE CALIFORNIA SOCIETY OF INTERNAL MEDICINE

Dr. Robert L. Smith, Jr., F.A.C.P., San Francisco, President of the California Society of Internal Medicine, presided at the Annual Meeting of the Society held in Yosemite National Park, October 17-19, 1958. Dr. James H. Thompson, F.A.C.P., San Francisco, served as Chairman and Drs. William C. Mumler, (Associate), Los Angeles, and David A. Ryland, F.A.C.P., San Francisco, as members of the Annual Meeting Committee. Dr. George K. Wever, F.A.C.P., Stockton, Secretary-Treasurer of the American Society of Internal Medicine, reported on the Annual Meeting of the Society held in Atlantic City, April 27, 1958. Dr. Paul M. Aggeler, F.A.C.P., Associate Clinical Professor of Medicine, University of California School of Medicine, and Chief of the Department of Medicine, Children's Hospital, San Francisco, and Dr. Joseph F. Ross, F.A.C.P., Professor of Medicine and Professor of Radiation Biology at the University of California School of Medicine at Los Angeles, were participants in the scientific session. Their subjects were "Mild Thromboplastin Deficiency Diseases" and "Iron Metabolism and Anemia," respectively.

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#### Personal Notes

Dr. Roger O. Egeberg, (Associate), was advanced recently from Medical Director of the Los Angeles County Hospital to Medical Director of the Department of Charities, Los Angeles County, Los Angeles, Calif. In his new capacity, he will be the chief officer for all medical welfare programs in the county.

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Dr. William L. Hewitt, F.A.C.P., was promoted to Professor of Medicine at the University of California School of Medicine at Los Angeles on July 1, 1958.

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Three Fellows of the College participated in the Scientific Session Program of the American Cancer Society at the Annual Meeting at New York, N. Y., October 20-21, 1958. Dr. Ferdinand C. Helwig, Kansas City, Mo.; Dr. Henry L. Bockus, Philadelphia, Pa.; and Dr. Eugene P. Pendergrass, Philadelphia, Pa., were speakers on the symposium program on "Cancer of the Colon and Rectum."

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Brigadier General Clement F. St. John, F.A.C.P., (MC) U.S.A., recently assumed command of the Brooke Army Hospital at the Brooke Army Medical Center, Fort Sam Houston, Tex.

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At the Annual Meeting of the American Gastroscopic Society held in Washington, D. C., May 24, 1958, Dr. J. Edward Berk, F.A.C.P., Detroit, Mich., was elected President; Dr. C. Wilmer Wirts, F.A.C.P., Philadelphia, Pa., Vice President, and Dr. Arthur M. Olsen, F.A.C.P., Rochester, Minn., Secretary-Treasurer.

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Major General Paul I. Robinson, F.A.C.P., (MC), U.S.A., Executive Director, Office for Dependents' Medical Care, Army Surgeon General's Office, Washington, D. C., became Coördinator of Medical Relations for the Metropolitan Life Insurance Company when he retired August 31, 1958, after more than 30 years of active service.

Colonel Herbert W. Coone, F.A.C.P., U.S.A.F., (MC), will be assigned as Consultant in Internal Medicine, Office of the Surgeon General, Headquarters of the U.S.A.F., Washington, D.C., in February, 1959. Colonel Coone has been Chief of Professional Service at the U.S.A.F. Hospital, Wiesbaden Air Force Base, Wiesbaden, Germany, for the past three years.

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Colonel Archie A. Hoffman, F.A.C.P., U.S.A.F., (MC), will become Chief of Professional Service at the U.S.A.F. Hospital, Andrews Air Force Base, in November, 1958. For the past four years Colonel Hoffman has been Consultant in Internal Medicine, Directorate of Professional Services, Office of the Surgeon General, Headquarters, U.S.A.F., Washington, D. C.

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Dr. Theodore L. Squier, F.A.C.P., Milwaukee, Wis., has been appointed to a three-year term on the Graduate Training Grant Committee of the National Institute of Allergy and Infectious Diseases as a Special Consultant to the Public Health Service.

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Dr. Tibor J. Greenwalt, F.A.C.P., Milwaukee, Wis., and Dr. Robert D. Taylor, F.A.C.P., Marshfield, Wis., were speakers at the 26th Annual Convention of the American Society of Medical Technologists in Milwaukee, Wis., June 15-20, 1958.

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Dr. Francis F. Rosenbaum, F.A.C.P., Milwaukee, Wis., was recently named Secretary of the Council of Clinical Cardiology of the American Heart Association.

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Dr. Michael W. Shutkin, F.A.C.P., Milwaukee, Wis., has been promoted to Associate Clinical Professor of Medicine, and Dr. Julius M. Meyer, (Associate), Milwaukee, Wis., was advanced to Assistant Clinical Professor of Medicine at the Marquette University School of Medicine.

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Dr. Mischa J. Lustok, F.A.C.P., Milwaukee, Wis., was elected Governor for the State of Wisconsin at the Annual Meeting of the American College of Chest Physicians in San Francisco, Calif.

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The following physicians have been elected as Officers of the Florida Society of Internal Medicine: Dr. W. Dean Steward, F.A.C.P., Orlando, President; Dr. Lawrence E. Geeslin, F.A.C.P., Jacksonville, President-Elect; Dr. John M. Packard, F.A.C.P., Pensacola, Vice President; and Dr. Charles K. Donegan, F.A.C.P., St. Petersburg, Secretary-Treasurer.

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The Watson Clinic of Lakeland, Fla., has recently occupied its new building at 1609 Lakeland Hills Boulevard. Dr. Malcomb B. Burris, (Associate), has recently joined the staff as hematologist. Others in the Department of Internal Medicine include Dr. Jere W. Annis, F.A.C.P.; Dr. Henry Fuller, F.A.C.P.; and Dr. William P. Logan, F.A.C.P.

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Dr. Maurice C. Pincoffs, M.A.C.P., Baltimore, Md., received a "Citizen Citation" in June, 1958, awarded by the University of Chicago Alumni Association.



Professor G. A. Elliott, President of the College of Physicians, Surgeons and Gynaecologists of South Africa, has been awarded a W.H.O. Fellowship to visit Great Britain and the United States of America to study "The Effect of Radiation on Man," with emphasis upon the clinical and genetic effects on the individual and on the community. The clinical study will include, particularly, the effects on the blood and the bone marrow and the present status of the position of marrow replacement.

Professor Elliott will reach the United States in the early autumn and proposes to confer with Officers of the American College of Physicians for mutual interest between the two Colleges.

At the inauguration of the College of Physicians, Surgeons and Gynaecologists of South Africa, a year ago, Dr. Edward L. Bortz, F.A.C.P., Philadelphia, Pa., officially represented the American College of Physicians and received an Honorary Fellowship.

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Professor J. G. Hayden has been installed as President of the Royal Australasian College of Physicians for two years, 1958-1960. Dr. H. Maynard Rennie, of Sydney, continues as the Honorary Secretary.

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Dr. Robert B. Howard, (Associate), was named Dean of the University of Minnesota Medical School, Minneapolis, Minn., succeeding Dr. Harold S. Diehl who retired on June 30, 1958, after serving as Dean of the School since 1935. Dr. Howard joined the staff of the University as a Fellow in Medicine in 1945 and was promoted subsequently to Instructor in Medicine, Assistant Professor, Associate Professor and Professor. In recent years he served as Director of Continuation of Medical Education.

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The following members of the College were elected officers of the New York Academy of Gastroenterology at a recent meeting: Drs. Milton J. Matzner, F.A.C.P., Brooklyn, N. Y., President; Joseph R. Van Dyne, (Associate), Forest Hills, N. Y., First Vice President; Hyman M. Robinson, (Associate), Brooklyn, N. Y., Second Vice President; and Jerome Weiss, (Associate), New York, N. Y., was named Recording Secretary.

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Dr. Edgar C. Beck, F.A.C.P., Associate Clinical Professor of Medicine, University of Buffalo School of Medicine, Buffalo, N. Y., has served as Chairman of the Annual Participating Fund for Medical Education of the University of Buffalo for the past three years. Under his leadership, the fund has received national recognition on several occasions. The most recent honor was the awarding of the Alumni Service Award of the American Alumni Council at a meeting held in Lake Placid, N. Y., in June, 1958.

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The students, colleagues and friends of Dr. Hans Lissner, F.A.C.P., Clinical Professor of Medicine and Endocrinology, Emeritus, at the University of California School of Medicine, San Francisco, Calif., recently arranged to have his portrait painted. The portrait was executed by the distinguished Belgian artist, Mr. Alfred Jonniaux. On June 20, it was presented to the University of California Medical School at a ceremony at the Bohemian Club. Among those present were many friends from different sections of the country who were in San Francisco for the meeting

of the Endocrine Society, of which Dr. Lisser is a past President. The presentation was made by the Chairman of the Committee, Dr. Roberto F. Escamilla, F.A.C.P., and the portrait was accepted by the Dean of the School of Medicine, Dr. John B. de C. M. Saunders. Dr. Lisser was the Governor of the American College of Physicians for Northern California from 1929 to 1936.

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Dr. George C. Griffith, F.A.C.P., Los Angeles, Calif., American College of Physicians Governor for Southern California and President of the Los Angeles County Heart Association, recently announced the newly-established policy of the Association which places all discoveries made by investigators who received grants from the Heart Fund to be in the public domain. He explained that the ruling would prevent investigators from receiving royalties from drugs or therapeutic devices perfected as a result of their studies.

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Thirteen Fellows and one Associate of the College were participants in the scientific program of the 5th Annual Meeting of The Academy of Psychosomatic Medicine in New York, N. Y., on October 9-11, 1958. The Fellows include: Drs. Nathan Beckenstein, Brooklyn, N. Y.; Louis F. Bishop, New York, N. Y.; Wilfred Dorfman, Brooklyn, N. Y.; Sidney M. Fierst, Brooklyn, N. Y.; Martin Perlmutter, Brooklyn, N. Y.; M. Murray Peshkin, New York, N. Y.; Theodore Rothman, Beverly Hills, Calif.; Howard A. Rusk, New York, N. Y.; Irving J. Sands, Brooklyn, N. Y.; Arthur L. Scherbel, Cleveland, Ohio; Samuel L. Swiller, Brooklyn, N. Y.; Victor Szyrski, Ottawa, Ont., Can.; Edward Weiss, Philadelphia, Pa.; Charles F. Wilkinson, Jr., New York, N. Y., and Dr. Burton L. Zohman, Brooklyn, N. Y. The Associate was Dr. L. Secord Palmer, Elmira, N. Y. Dr. Wilfred Dorfman served as Program Chairman and is the Secretary of the Academy.

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Dr. John Wendell Macleod, F.A.C.P., Dean and Member of Advisory Council, University of Saskatchewan College of Medicine, Saskatoon, Sask., Can., served as Canadian Co-Director of a Student Study Tour and Seminar in Yugoslavia, under the auspices of the World University Service of Canada, June 23-August 6, 1958. Pre-seminar lectures were held at Hallam Heath, Surrey, England, June 23-July 4, 1958.

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Dr. Walter E. Vest, F.A.C.P., Huntington, W. Va., received an honorary degree of Master of Arts, "in appreciation of scholarship and service to humanity" from The College of William and Mary at its 258th Annual Commencement Exercises at Williamsburg, Va., June 8, 1958. This is the first degree *honoris causa* to be given in the 20th century. The first degree was given to Benjamin Franklin in 1756.

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Dr. William W. Stead, (Associate), Gainesville, Fla., was elected Vice President, and Dr. George E. Schreiner, (Associate), Washington, D. C., was named Secretary-Treasurer of the American Federation for Clinical Research at the recent Annual Meeting of the organization.

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Three Fellows of the College were participants in the 5th International Congress on Diseases of the Chest, sponsored by the Council on International Affairs of the American College of Chest Physicians, held in Tokyo, Japan, September 7-11, 1958.

Dr. William A. Winn, Springville, Calif., discussed the subject, "Fungus Infections," in a symposium on that subject. Drs. Hastings H. Walker, Honolulu, Hawaii; John F. Briggs, St. Paul, Minn.; and Burgess L. Gordon, Albuquerque, N. M., were moderators of panels which discussed the subjects, "Tuberculosis," "Coronary Disease," and "Aviation Medicine," respectively.

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At the recent Annual Meeting of the Tennessee State Medical Association, Dr. Bergein M. Overholt, F.A.C.P., Knoxville, Tenn., was elected a Vice President, and Dr. Rudolph H. Kampmeier, F.A.C.P., Nashville, Tenn., was elected Secretary-Treasurer.

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Four Fellows and three Associates of the College from Indiana were named officers of the newly-organized Indiana Society of Internal Medicine. The Fellows are: Drs. Stephen L. Johnson, Evansville, President; William D. Province, Franklin, Vice President; E. Paul Tischer, Indianapolis, Secretary-Treasurer; and Arthur B. Richter, Indianapolis, was named a Councilor. The Associates included Drs. Sherman L. Egan, South Bend, who was named President-Elect for 1959; John F. Ling, Richmond, and George W. Willison, Evansville, who were named as Councilors.

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Four Fellows of the College from Rochester, Minn., who have recently reached emeritus status on the staff of the Mayo Clinic and of the faculty of the University of Minnesota (Mayo Foundation) were honored at ceremonies at the University of Minnesota, Minneapolis, Minn., May 23, 1958. The four who were honored are: Drs. Samuel F. Haines, Philip S. Hench, Bayard T. Horton, and James F. Weir. Each of the men received certificates which read in part: "The Regents and the President of the University of Minnesota, in recognition of devoted service, express their gratitude and high esteem through the presentation of this Certificate of Merit. . . ."

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Dr. Edgar Hull, F.A.C.P., New Orleans, La., was named an Honorary Fellow of the American College of Gastroenterology at the 23rd Annual Convention of the College in New Orleans, La., October 20-22, 1958.

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Dr. Meyer Texon, F.A.C.P., Lecturer in Forensic Medicine, New York University Post-Graduate Medical School, New York, N. Y., won the Hektoen Silver Medal for original investigation at the Scientific Exhibit of the American Medical Association in San Francisco, Calif. His exhibit on the subject, "The Hemodynamic Concept of Atherosclerosis" included diagrams, specimens, statistical data, and working models.

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Drs. S. R. Townsend and G. W. Halpenny, both Fellows of the College from Montreal, Quebec, Can., were named Senior Physicians of the Montreal General Hospital at a recent meeting of the Board of Management.

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Dr. Howard Boyd, F.A.C.P., Manchester, Conn., was named Chief Emeritus of Pediatrics at the Manchester Memorial Hospital recently, where he had served for many years as Chief of the Pediatrics Department.

Dr. John Donnelly, (Associate), Medical Director of the Institute of Living, Hartford, Conn., recently addressed the Mental Health Association of New Britain, Conn., on the subject of "Cultural Contributions to Maladjustment."

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Dr. Burton L. Zohman, F.A.C.P., has been appointed Clinical Professor of Medicine at the State University of New York College of Medicine at New York City.

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Dr. Mayer A. Green, F.A.C.P., was recently appointed Chief of the Division of Allergy of the Department of Medicine at the Montefiore Hospital, Pittsburgh, Pa.

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Dr. George R. Herrmann, III, F.A.C.P., Professor of Medicine and Director of Cardiovascular Service at the University of Texas Medical Branch, Galveston, Tex., and First Honorary Professor of Medicine at the University of Pueblo, Mexico, and Dr. Martin G. Goldner, F.A.C.P., Clinical Professor of Medicine, State University College of Medicine at New York City, were participants in the First Congress of Medicine and Surgery held at the University of Pueblo, July 13-19, 1958.

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Dr. Leo J. Wade, F.A.C.P., Associate Clinical Professor of Industrial Medicine at the New York University Post-Graduate Medical School and Medical Director of the Esso Standard Oil Company, New York, N. Y., is Chairman of the Organizing Committee for the 13th International Congress on Occupational Health which is to be held in New York, N. Y., in 1960. It is anticipated that delegates will attend from 50 nations. The last triennial Congress was held in Helsinki, Finland.

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At a recent meeting of the North Carolina Society of Internal Medicine, the following members of the College were elected to office: Drs. Charles W. Styron, Sr., F.A.C.P., Raleigh, President; Monroe T. Gilmour, F.A.C.P., Charlotte, President Elect; Walter Spaeth, F.A.C.P., Elizabeth City, First Vice President; Kenneth D. Weeks, Sr., F.A.C.P., Rocky Mount, Second Vice President, and Henry L. Valk, (Associate), Winston-Salem, Secretary-Treasurer.

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Dr. Kenneth R. Crispell, (Associate), formerly Associate Professor of Internal Medicine, University of Virginia School of Medicine, has been appointed Professor and Director of the Department of Medicine at the New York Medical College, Flower and Fifth Avenue Hospitals, New York, N. Y. He succeeds Dr. Linn J. Boyd, F.A.C.P., who resigned from the position he held for 30 years to become Director of the Division of Graduate Studies at the College.

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Dr. Joseph O. Weilbaeher, Jr., F.A.C.P., New Orleans, La., was elected President, and Dr. Boni J. DeLaurel, F.A.C.P., New Orleans, La., was named Treasurer of the New Orleans Graduate Medical Assembly, recently.

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Dr. John Everett Gordon, F.A.C.P., was named Professor of Preventive Medicine and Epidemiology, Emeritus of the State University of New York College of Medicine at New York City on July 1, 1958.

At a recent meeting of the American Psychiatric Association, Dr. David C. Wilson, Sr., F.A.C.P., Charlottesville, Va., was elected a Vice President, and Dr. Robert H. Felix, F.A.C.P., Bethesda, Md., was named Treasurer of the Association.

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Dr. Jere W. Annis, F.A.C.P., Lakeland, Fla., was elected President at a recent meeting of the Florida Medical Association.

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Dr. Robert J. Boucek, (Associate), Associate Professor of Cardiology, University of Miami School of Medicine, Coral Gables, Fla., received the outstanding award in a competition for studies related to aging, sponsored by Ciba Pharmaceutical Products, Inc. His paper was selected from among 62 submitted by research scientists in 19 different countries. His subject was "The Effect of Tissue Age and Sex upon the Metabolism of Rat Collagen."

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Dr. Gordon B. Myers, F.A.C.P., Chairman of the Department of Medicine, Wayne State University College of Medicine, Detroit, Mich., has been appointed Head of the new University Service in Internal Medicine at the Harper Hospital in Detroit.

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Dr. Alfred C. LaBocchetta, F.A.C.P., Philadelphia, Pa., has been named Acting Executive Director of the Philadelphia General Hospital.

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Three Fellows and two Associates of the College were participants on the program of the 7th Annual Western Cardiac Conference sponsored by the Colorado Heart Association, the Colorado State Department of Public Welfare, the Fitzsimons Army Hospital, and the University of Colorado School of Medicine and held in Denver, Colo., August 11-15, 1958. The Fellows included: Drs. William Dock, Brooklyn, N. Y.; Edward Massie, St. Louis, Mo., and George E. Wakerlin, New York, N. Y. The two Associates were Lt. Col. Laurence M. Hursch, (MC), U.S.A., Denver, Colo., and Dr. John H. Moyer, II, Philadelphia, Pa.

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Drs. J. Earle Estes, F.A.C.P., Rochester, Minn., and Abraham M. Rabiner, F.A.C.P., New York, N. Y., were named Vice Presidents of the American College of Angiology at the Annual Meeting of the College on September 1, 1958.

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Dr. Robert R. Montgomery, (Associate), Washington, D. C., has been elected President of the Clinical Club of Washington, D. C.

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Dr. Edward D. Freis, F.A.C.P., Washington, D. C., has been named Associate Editor of the *Heart Bulletin* of the American Heart Association.

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Dr. J. Winthrop Peabody, Sr., F.A.C.P., Professor Emeritus, Diseases of the Respiratory System, Georgetown University School of Medicine, Washington, D. C., was awarded the 1958 College Medal by the American College of Chest Physicians at the 24th Annual Meeting of the College held in San Francisco, Calif., June 18-22, 1958. Dr. Peabody has served as Chairman of the Council on Postgraduate Medical Education of the College since its inception in 1945. At the same meeting, Dr. John F. Briggs, F.A.C.P., St. Paul, Minn., was elected Chairman of the Board of Regents of the College.



Dr. Kenneth G. Kohlstaedt, F.A.C.P., Governor for Indiana and Professor of Medicine, Indiana University School of Medicine, Indianapolis, Ind., reports that a new medical science building has been completed at the University at the cost of \$7,500,000. It will provide 3,400,000 cubic feet of space for laboratories, classrooms, and a library. Since September 1, 1958, all four years of medical school training have been located on the campus at Indianapolis.

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Colonel Benjamin A. Strickland, Jr., F.A.C.P., U.S.A.F. (MC), formerly Surgeon of the Technical Training Air Force at Gulfport, Miss., became Surgeon of the Air Defense Command at Ent Air Force Base, Colo., on August 1, 1958.

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Dr. Paul Kimmelstiel, F.A.C.P., was named Director of Laboratories at the Milwaukee County General Hospital, Milwaukee, Wis., and Professor of Pathology at the Marquette University School of Medicine, on April 1, 1958. Dr. Kimmelstiel was formerly Director of Laboratories, Charlotte Memorial Hospital, Charlotte, N. C.

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Dr. Jesse McCall, F.A.C.P., Newton, N. J., was elected First Vice President of the Medical Society of New Jersey at a recent meeting of the Society.

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Dr. Francis L. Hummer, (Associate), was promoted to Associate Clinical Professor of Medicine, University of Wisconsin Medical School, Madison, Wis., in June, 1958.

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Dr. Theodore H. Sattler, Yankton, S. D., has been elected Chairman of the Council of the South Dakota State Medical Association.

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Two Fellows of the College were honored at a dinner recently for their contribution to research on drug addiction. Letters of commendation were presented by the Secretary of Health, Education and Welfare Department to Drs. Lawrence Kolb, Washington, D. C., and Walter L. Treadway, Santa Barbara, Calif. Both men are retired Assistant Surgeons General of the Department.

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Dr. Andrew L. Banyai, F.A.C.P., Chicago, Ill., was recently elected an Honorary Member of the Sociedad Colombiana de Tisiologia, Bogota, Colombia, and an Honorary Member of the Sociedad Antioqueña de Tisiologia y Patologia Toracica, Medellin, Colombia.

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Dr. William S. Clark, F.A.C.P., New York City, is the Editor-in-Chief of the newly-established official journal of the American Rheumatism Association, ARTHRITIS AND RHEUMATISM. The editorial office is at 800 2nd Avenue, New York 17, N. Y. The journal is published for the American Rheumatism Association by Grune & Stratton, 381 4th Avenue, New York 16, N. Y. Domestic subscription rate is \$10.00 per annum; foreign rate, \$11.00. The journal is published bimonthly.

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Dr. George S. Grier, III, F.A.C.P., Newport News, Va., was elected President of the Virginia Heart Association recently.

Dr. Lee E. Sutton, Jr., F.A.C.P., recently resigned as Chairman of the Department of Pediatrics of the Medical College of Virginia. He will remain with the department as a Professor.

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Dr. Pat A. Tuckwiller, F.A.C.P., Charleston, W. Va., was elected President of the Alumni Association of the West Virginia School of Medicine at the meeting of the Association on June 1, 1958.

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Dr. Mitchel D. Covell, (Associate), Assistant Clinical Professor of Medicine, College of Medical Evangelists, Loma Linda, Calif., who is serving as Research Committee Chairman for the Los Angeles County Heart Association, recently announced the awarding of \$165,770.40 to support heart research at the local medical schools and hospitals. The 23 awards were supported from the funds received during the 1958 Heart Fund Campaign.

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*OBITUARIES*

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The College records with sorrow the deaths of the following members. Their obituaries will appear later in these columns.

Dr. H. Albert Holland, F.A.C.P., Philadelphia, Pa., August 9, 1958

Dr. Ruth Alice Koons, F.A.C.P., Columbus, Ohio, June 9, 1958

Dr. Allen A. C. Nickel, F.A.C.P., Bluffton, Ind., July 31, 1958

Dr. Edward Julius Steiglitz, F.A.C.P., Washington, D. C., June 11, 1958

Dr. William J. Walker, F.A.C.P., New York, N. Y., May 18, 1958

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**DR. EDMOND C. ALBERTON**

It is with regret that the death of Dr. Edmond C. Alberton of San Francisco, California, is to be reported as of April 19, 1958. His death was caused by coronary thrombosis and hypertension.

Dr. Alberton, Associate in the College, was born October 7, 1916, in San Francisco, California. He received his B.A. degree at the University of California in 1937 and his M.D. at the University of California School of Medicine in 1941. He served as intern at the San Francisco Hospital during 1940-41 and had postgraduate training in medicine at that hospital during 1941-43.

He served during World War II as Major in the Medical Corps, A.U.S., from 1943-46. He served in army hospitals in England and Germany, 1944-46.

Following his military service, he became a Clinical Instructor in Medicine at the University of California School of Medicine and Assistant in Medicine at Mount Zion Hospital.

Dr. Alberton was a member of the following medical organizations: American Medical Association; California Medical Association; American College of Chest Physicians; California Society of Internal Medicine; San Francisco Medical Society; Alpha Omega Alpha; Diplomate, American Board of Internal Medicine. He was an Associate in The American College of Physicians.

He is survived by his widow, Mrs. Nadine Alberton of 145 Presidio Avenue, San Francisco, California.

STACY R. METTIER, M.D., F.A.C.P.,  
A.C.P. Governor for Northern California and Nevada

**DR. WILLIAM ANTINE**

Dr. William Antine was born October 14, 1903, Brooklyn, New York, and died on June 24, 1958, of coronary thrombosis.

Dr. Antine received his degree of Doctor of Medicine at the Long Island College of Medicine, New York in 1926. He interned at Beth Israel Hospital, New York City, 1926-28. His postgraduate training consisted of gastroenterology, electrocardiography and sigmoidoscopy at Columbia University College of Physicians and Surgeons, 1944-45.

His hospital appointments were as follows: Associate Attending Gastroenterologist, Coney Island Hospital; Attending Physician, Maimonides Hospital.

Dr. Antine was a member of the following: American Medical Association; Medical Society of the State of New York; American Gastroenterology Association; Kings County Medical Society and the Brooklyn Society of Internal Medicine. He

was a Diplomate of the American Board of Internal Medicine and an Associate of the American College of Physicians since 1954.

Dr. Antine is survived by his widow, Mrs. Estelle Antine, 283 E. 5th Street, Brooklyn 18, New York. His confreres note with sincere regret the passing of Dr. Antine.

IRVING S. WRIGHT, M.D., F.A.C.P.,  
Governor, Eastern Division, New York State

#### DR. WILLIAM ST. CLAIR BAULD

The medical community of Montreal, Quebec, was shocked to learn of the tragic death in an automobile accident on July 20, 1958, of Dr. William St. Clair Bauld, his wife, and two of his four children.

Dr. Bauld was born in 1919 in Wolfville, Nova Scotia, and was educated in that province. He received his B.A. degree with honors in chemistry from Acadia University, and his M. Sc. degree from Dalhousie University Faculty of Medicine. In 1941, he enlisted in the Royal Canadian Artillery as a Second Lieutenant and was demobilized in 1945, with the rank of Major. He then entered the study of medicine at McGill University Faculty of Medicine, graduating as a prizeman with the degree of M.D., C.M. in 1949.

Following graduation, he spent five years at Edinburgh University in the Department of Biochemistry, where he made a name for himself both in his research and as a Lecturer. He returned to Montreal in 1954 with the appointment of Assistant in the Department of Metabolism and Toxicology at the Montreal General Hospital and Lecturer in Medicine at McGill University. At the time of his death, he was Associate Director of the Department, Assistant Director of the Montreal General Hospital McGill University Clinic, and Assistant Professor of Medicine. He was admitted to the American College of Physicians as an Associate in 1957.

Dr. Bauld's interests were primarily in biochemistry and endocrinology, as a teacher, consultant, and research worker. He was the prime mover in the founding of the Canadian Society of Clinical Chemists, of which he was the Honorary Secretary. His ability and zeal were rewarded by his election to the Honorary Secretaryships of the Montreal Physiological Society and of the Montreal Medico-Chirurgical Society.

Complementing his medical life, Dr. Bauld was an active member of his local church where he regularly taught in the Sunday School. His home was always open, and the gathering place of his colleagues, fellow workers, and of visitors to Montreal.

The loss of one held in such affectionate esteem in both medical circles and in his community is not easily replaced, but the memory of his accomplishments and energy will be an inspiration to those who must carry on.

WALTER DE M. SCRIVER, M.D., F.A.C.P.,  
Governor for the Province of Quebec

#### DR. GERALD MORRIS CLINE

Dr. Gerald Morris Cline, F.A.C.P., was born May 21, 1896, in LeRoy, Illinois, and died May 17, 1958, in Fort Lauderdale, Florida, where he had retired because of poor health. Dr. Cline was the pioneer pediatrician in Normal and Bloomington, Illinois, where he had practiced for thirty-three years.

Dr. Cline graduated from the University of Illinois College of Medicine in 1919 and interned at The Mercy Hospital in Chicago. This training was followed by pediatric service at Misericordia, Michael Reese and Children's Memorial Hospitals in 1921 and 1922.

In addition to his practice in pediatrics, Dr. Cline was interested in allergy and, in 1935 and 1936, was a Member of the Staff of the Allergy Department of Northwestern University Medical School. He was Head of the Department of Pediatrics at St. Joseph's and Brokan (Normal) Hospitals and the Medical Director of The Illinois Soldiers' and Sailors' Children's School Hospital in Normal. Dr. Cline was a member of the Medical Advisory Committee, Division of Handicapped Children, State of Illinois, Department of Public Welfare, from 1937 to 1949. In 1950 he was appointed Associate Professor of Pediatrics at the University of Illinois College of Medicine.

Dr. Cline became the first Fellow of The American College of Physicians in Bloomington in 1930. He was a charter member of The American Academy of Pediatrics and was a past President of the Illinois Chapter. He was a Diplomate of The American Board of Pediatrics and a member of the American College of Allergy, as well as the McLean County, Illinois State and the American Medical Associations.

Dr. Cline was a good citizen and a good physician and was a credit to his community and his profession. He is survived by his wife, Hilda L. Cline, one son, Gerald, both of Fort Lauderdale, Florida, a daughter, Mrs. Thomas L. Stilwell, of Shaker Heights, Ohio, and three sisters.

THOMAS D. MASTERS, M.D., F.A.C.P.,  
Governor for Southern Illinois

#### DR. SAMUEL STUDDIFORD COOLEY

Dr. Samuel Studdiford Cooley, F.A.C.P., of Black Mountain, North Carolina, died from myocardial infarction May 9, 1958, following illness which had forced his retirement in February 1958.

Dr. Cooley was born August 5, 1905, at Trenton, New Jersey. He graduated from Princeton University in 1927, and in 1934 he received his M.D. degree from New York University College of Medicine. From 1934 to 1937 he interned at Bellevue Hospital Center, after which he entered private practice at Black Mountain.

He served as a Captain in the Medical Corps of the U. S. Army 1942-1945, and was assigned successively at San Antonio Aviation Cadet Center, Liberal, Kansas, Air Force Base, and at the 134th and 54th General Hospitals. In May 1947, Dr. Cooley completed eight months postgraduate work at University of Pennsylvania Graduate School of Medicine, following which he returned to Black Mountain and was in practice in Internal Medicine until 1957. He was active Staff Physician, Memorial Mission Hospital, Ashville, North Carolina, 1947-1957; Consultant in Internal Medicine, Western North Carolina Sanatorium, 1950-1957, and Consultant (Medicine), Veterans Administration Hospital, Oteen, North Carolina, 1955-1957. The Oteen Hospital engaged Dr. Cooley full-time on July 1, 1957.

Dr. Cooley was a Diplomate of the American Board of Internal Medicine, and he was a member of the national, state, and county medical societies. He belonged also to the Southern Medical Association, the American Heart Association, and the American Trudeau Society. He became a Fellow of the American College of Physicians in 1957.

Dr. Cooley was known as an outstanding internist in his community. He was clinically wise and he was regarded with affection by patients and colleagues because of his modesty, friendliness, and understanding. He is survived by his wife, Mrs. Mary Louise Hay Cooley, 221 New Bern St.



## DR. HARRY ISAAC CRAMER

The sudden death in Montreal, Quebec, on June 4, 1958, of Dr. Harry Isaac Cramer, F.A.C.P., brought to an end his brave fight against the condition of chronic leukemia from which he had suffered for several years. Although he was well aware of his condition, first diagnosed by himself, Dr. Cramer did not give in, but continued resolutely until the last with his hospital and teaching duties. He was still busy with his practice on the day of his death. He was predeceased by his wife, who was killed in a motor accident; two children of teen age survive.

Dr. Cramer was born in Russia July 14, 1910. Coming to Montreal at an early age, he received his preliminary education there. He was granted a B.Sc. degree by McGill University in 1934, and his M.D., C.M. degree in 1937.

Following a period of three years spent in internship and residency at the Jewish General and Royal Victoria Hospitals in Montreal, he entered private practice. He continued his studies and earned, by examination in 1946, the Fellowship in Medicine of the Royal College of Physicians and Surgeons of Canada. He was made a Fellow of the American College of Physicians in 1950.

He was a member of his local, provincial and federal medical societies, and also of the American Diabetes Association. At the time of his death, he held the rank of Lecturer in Medicine at McGill University Faculty of Medicine, and was an Assistant Physician on the staff of the Royal Victoria Hospital. His passing in his 48th year is greatly regretted by his colleagues and friends.

WALTER DE M. SCRIVER, M.D., F.A.C.P.,  
Governor for the Province of Quebec

## DR. JEROME STANLEY FRANKEL

Dr. Jerome Stanley Frankel, F.A.C.P., died in Cleveland, Ohio on June 1, 1958, of giant follicular hyperplasia and terminal pneumonia. He was born in Pultusk, Poland, on April 15, 1913. In 1935 he was awarded the A.B. degree by Ohio State University and in 1936 the degree of M.Sc. His M.D. degree and the degree of Ph.D. were conferred by the same University in 1941. After an internship at Jewish Hospital, Brooklyn, New York he entered the Medical Corps of the U. S. Army. Following his discharge with the rank of Major in 1946, he served a residency in medicine at Mt. Sinai Hospital, Cleveland, Ohio, after which he entered practice in Cleveland. In 1949 he was appointed Demonstrator in Medicine at Western Reserve University School of Medicine and became a member of the Staff of Mt. Sinai Hospital, where he served as Physician-in-Charge of the Outpatient Department.

Dr. Frankel was a member of the American Medical Association, the Ohio State Medical Association, the Academy of Medicine of Cleveland, the American College of Allergists, the American Academy of Allergists, and the Cleveland Allergy Society. He was a Diplomate of the American Board of Internal Medicine and became a Fellow of the American College of Physicians in 1952. He also was a member of Phi Lambda Upsilon and Sigma Xi.

Dr. Frankel is survived by his wife, Mrs. Anna R. Frankel, and two sons and one daughter, 1667 Iydale Road, Cleveland Heights 18, Ohio. To them his colleagues in the College extend their sincere sympathy.

A. CARLTON ERNSTENE, M.D., F.A.C.P.,  
Governor for Ohio

## DR. LEONARD HENRY FREDRICKS

Dr. Leonard Henry Fredricks, F.A.C.P., died on April 27, 1958, in Bismarck, North Dakota. His death was due to coronary occlusion, of which he had recurrent attacks over a period of several years. He was born in 1901 at Crookston, Minnesota.

Dr. Fredricks received his B.S. degree in 1926 and his M.B. degree in 1927 from the University of Minnesota. He received his M.D. degree from the University of Minnesota Medical School in 1928. In 1927-28 he interned at the University of Minnesota Hospital. He also took postgraduate training in neurology at that institution in 1929.

Dr. Fredricks was a member of the Medical Staffs of the Bismarck and St. Alexius Hospitals and the Quain and Ramstad Clinic, Bismarck, North Dakota, since 1928. He was a member of the American Medical Association; the North Dakota State Medical Association; the Sixth District Medical Society; a Diplomate of the American Board of Internal Medicine, and became a Fellow of the American College of Physicians in 1934. He established Life Membership with the College in 1943.

Dr. Fredricks was well known throughout the State of North Dakota and was highly regarded as an Internist by his colleagues. He was especially sympathetic with patients and is missed very much by all of those who knew him, including his patients and other physicians.

He is survived by his widow, Mrs. Gertrude L. Fredricks, 112 Avenue B, W., Bismarck, North Dakota, a son, Duane, and a daughter, Jean.

REINHOLD O. GOEHL, M.D., F.A.C.P.,  
Governor, North Dakota

## DR. SAMUEL JAMES GOLDBERG, SR.

It is with regret that we note the death of Dr. Samuel James Goldberg, Sr., F.A.C.P., of New Haven, Connecticut, who passed away on April 28, 1958. Dr. Goldberg was born in Hartford, Connecticut, on November 20, 1883.

After receiving his M.D. degree from the Yale University School of Medicine, he interned at the New Haven Hospital during the years 1907 and 1908. His postgraduate training included study in internal medicine at the Boston City Hospital in 1918 and in cardiology at the Mount Sinai Hospital, New York, New York in 1933 and 1945.

Dr. Goldberg served as Commissioner of Health in the City of New Haven, Connecticut from 1927 to 1942. He was Chief of the Medical Service at the Grace-New Haven Community Hospital in New Haven from 1935 to 1950 and was Consultant Staff Physician from 1950 to 1958.

He was a member of the American Medical Association; the Connecticut State Medical Society; the Yale Medical Society; the New Haven Medical Society; the American Heart Association, and was a Diplomate of the American Board of Internal Medicine. Dr. Goldberg became a Fellow of the American College of Physicians in 1934.

Dr. Goldberg is survived by his widow, Mrs. Hazel Palmer Goldberg, 999 Ridge Road, Hamden, Connecticut, and a daughter, Mrs. Virginia Burns of Orange, Connecticut.

Dr. Samuel James Goldberg, Sr., was an able, affable, highly-respected and cheerful internist. He will be missed by all who knew him.

JOHN C. LEONARD, M.D., F.A.C.P.,  
Governor for Connecticut

## DR. CLARENCE ELTON HUFFORD

Dr. Clarence E. Hufford, F.A.C.P., physician and radiologist, was born February 9, 1893, in Perrysburg, Ohio, a suburb of Toledo, on the Maumee River. Raised on a farm, he learned early to work hard, with the attributes of honesty and integrity. In 1912 he entered Oberlin College, majoring in biology, and received his A.B. in 1916. He entered Western Reserve University School of Medicine that fall. During his four years of medical school he did social service work at the East End Neighborhood House, taught biology to dental students, acted as technician in the surgical pathology laboratory of Lakeside Hospital, and as a special assistant in the pharmacological laboratory of the medical school. He received the M.D. degree in 1920.

Dr. Hufford served his internship at St. Vincent's Hospital, Toledo, Ohio, 1920-21 and then entered the practice of medicine and orthopedic surgery in Toledo. In 1929 he was stimulated by Dr. John T. Murphy, then Director of Radiology at St. Vincent's Hospital, to enter the field of radiology and, at the death of Dr. Murphy in 1944, he succeeded to the Directorship. In 1953 he became Consulting Radiologist.

He was a Diplomate of the American Board of Radiology and became a Fellow of the American College of Physicians in 1938. He was a member of many professional organizations and attained the office of President of the following: Northwestern Ohio Medical Association, 1938; Academy of Medicine of Toledo and Lucas County, 1940; Detroit Roentgen Ray and Radium Society, 1942; Ohio State Radiological Society, 1944; Ohio Division of the American Cancer Society, 1952, and the Radiological Society of North America, 1956. The Gold Medal of the American Cancer Society was awarded him in 1955.

While driving his car in Florida en route to a meeting of the American Radium Society at Hollywood Beach, he suffered an acute coronary thrombosis and died on March 25, 1958.

Dr. Hufford is survived by his wife, Crystal; his mother, Mrs. Amaretta Hufford; his daughter, Mrs. Virginia Willard, wife of Dr. Robert Willard, an ophthalmologist; and three grandchildren. Dr. Hufford was unassuming, kindly and always helpful. He leaves a multitude of friends.

MAURICE A. SCHNITKER, M.D., F.A.C.P.,  
Toledo, Ohio

## DR. THOMAS CHARLES KELLY

Dr. Thomas Charles Kelly, F.A.C.P., was born in Philadelphia February 22, 1882, and died in the same city on April 22, 1958, having lived a varied and useful life.

He received his Bachelor of Arts degree from LaSalle College in 1900, his Doctor of Medicine from the University of Pennsylvania in 1904, and his Master of Arts from LaSalle College in 1907.

During the years 1930 to 1940, he served as Associate in Pediatrics in the Graduate School of Medicine of the University of Pennsylvania. Subsequently he was Pediatrician to the Misericordia Hospital, and Consultant in Pediatrics to the Thomas M. Fitzgerald-Mercy, and St. Christopher's Hospitals, Philadelphia, Pennsylvania.

Dr. Kelly served in the Medical Corps, U. S. Navy during World War I. He was a member of the American Medical Association, the College of Physicians of Philadelphia, the Philadelphia Pediatric Society, and the Philadelphia Pathological Society. In 1920 he became a Fellow of the American College of Physicians.

He is survived by his daughter, Mother St. Christopher, S.H.C.J., the Academy of the Holy Child, Sharon Hill, Pennsylvania, to whom Dr. Kelly's many friends and colleagues offer sympathy and condolences.

WILLIAM A. JEFFERS, M.D., F.A.C.P.,  
Governor for Eastern Pennsylvania

#### DR. CARLYLE MORRIS

Dr. Carlyle Morris, F.A.C.P., of Metuchen, New Jersey, died suddenly of a cerebral hemorrhage on April 10, 1958. He was in his 63rd year. He was born in Pender County, North Carolina, on December 16, 1895. He received his B.A. degree from the University of North Carolina in 1916 and his M.D. degree from the University of Pennsylvania School of Medicine in 1922.

Dr. Morris was Visiting Physician at the New Jersey Home of Disabled Soldiers in Menlo Park and he was on the courtesy Staff of the Middlesex General Hospital in New Brunswick. He was Past President of the Middlesex County Medical Society and a member of the Medical Society of New Jersey, the American Medical Association and the Association of Military Surgeons. Dr. Morris was a Diplomate of the American Board of Internal Medicine, a Fellow of the American College of Physicians since 1938, becoming a Life Member in 1948.

He will be sorely missed by his many colleagues and friends. The condolences of the College are extended to his wife, Mrs. Virginia Morris, who resides at Spring St. and Lake Ave. in Metuchen, New Jersey.

EDWARD C. KLEIN, JR., M.D., F.A.C.P.,  
Governor for New Jersey

#### DR. GEOFFREY WILLIAM RAKE

Dr. Geoffrey William Rake, F.A.C.P., was born October 18, 1904, Fordingbridge, England, and died on April 20, 1958, in New York City, of a myocardial infarction.

Dr. Rake received Bachelor of Science and Doctor of Medicine degrees at Guy's Hospital Medical School, London, England in 1928. He interned at Guy's Hospital, London, England, 1927-28.

His appointments were as follows: Scientific Director, International Division of Olin Mathieson Chemical Corporation since 1956; Research Professor, University of Pennsylvania School of Medicine and University of Pennsylvania School of Veterinary Medicine, 1953-56. Research Associate, University of Toronto, 1936-37. Associate, Rockefeller Institute, 1931-36; Director of the Squibb Medical Division and Director of the Squibb Institute for Medical Research, 1937-58.

Dr. Rake was a member of the following: The Wistar Institute of Anatomy and Biology, 1953-56; Society of American Bacteriologists; Society for Experimental Biology and Medicine; American Association of Immunologists; Royal Society of Medicine (England); New York Academy of Medicine; Association of American Physicians; Society for Clinical Investigation; American Medical Association; American Therapeutic Society and Fellow of the American College of Physicians since 1956. He was also a member of the Editorial Board, *Antibiotics and Chemotherapy* and Associate Editor, *Virus and Rickettsial Diseases of Man*.

Dr. Rake was the author of more than one hundred and fifty articles published in the country's major medical journals.



Dr. Rake is survived by his widow, Mrs. Helen J. Rake, Great Road, R.F.D. #2, Princeton, New Jersey. It is with especial regret that we record the death of this talented physician in the prime of his life.

IRVING S. WRIGHT, M.D., F.A.C.P.,  
Governor, Eastern Division, New York State

#### DR. WILLIAM DENNIS SCANLAN, JR.

Dr. William Dennis Scanlan, Jr., F.A.C.P., was born October 17, 1911, in Brooklyn, New York, and died on May 8, 1958, of a myocardial infarction.

Dr. Scanlan received his degree of Bachelor of Arts at Hamilton College in 1934 and the degree of Doctor of Medicine at Yale University School of Medicine in 1938. He interned at Kings County Hospital, Brooklyn, New York, 1938-40. His postgraduate training was as follows: Cardiology, Massachusetts General Hospital, Boston, 1940 and Mount Sinai Hospital, New York, 1942, and Internal Medicine, New York University Postgraduate Medical School, 1942 and 1946.

His hospital appointments were as follows: Assistant Attending Physician, Methodist Hospital, Brooklyn, 1942-53; Assistant Attending Physician, St. Clare's and Roosevelt Hospitals, 1947-52; Assistant in Medicine, New York University College of Medicine, 1949-52; Assistant Attending Physician, Strang Cancer Prevention Unit, Memorial Center for Cancer and Allied Diseases. Associate Attending Physician at North Shore Hospital, Manhasset and St. Francis Cardiac Hospital, Roslyn, Long Island, to 1958. Military service: Lieutenant Commander (MC), U.S.N., 1942-46.

Dr. Scanlan was a member of the following: American Medical Association; Medical Society of the State of New York; New York County Medical Society; Society of Military Surgeons, and a Fellow of the American College of Physicians. He was a diplomate of the American Board of Internal Medicine.

He is survived by his widow, Mrs. Clayton Estes Scanlan, a son and daughter residing at 322 Abbey Road, Manhasset, New York.

Dr. Scanlan, who came from a family of many doctors, will be sorely missed by his colleagues and friends.

IRVING S. WRIGHT, M.D., F.A.C.P.,  
Governor, Eastern Division, New York State

#### DR. HENRY WALLACE

Dr. Henry Wallace, F.A.C.P., was born in 1868 in Brooklyn, New York, and died in New York City on April 24, 1958, following a broken hip and an operation to relieve this condition.

Dr. Wallace received his degree of Doctor of Medicine at Long Island College Hospital in 1890. He interned at Long Island College Hospital, 1890-91. He received his postgraduate training in Cardiology, London Hospital, England, 1913.

He was Emeritus Physician, Mountainside Hospital, Montclair, New Jersey. As a Major and Surgeon, 47th New York Infantry, National Guard, New York, he served with distinction in the Spanish-American War, winning a citation from the Government of Cuba.

During World War I, Dr. Wallace established a cardiac department at Mountainside Hospital in Montclair, New Jersey, which is said to have been the first in New Jersey to use an electrocardiograph. He served for a number of years as a heart specialist in Glen Ridge, New Jersey, before returning to New York to establish a similar practice. He retired in 1937.



Dr. Wallace was a member of the following: American Medical Association; New York Academy of Medicine; Association of Military Surgeons of the United States; United Spanish War Veterans; Military Order of Foreign Wars; Associated Physicians of Montclair; New York County Medical Society; Medical Society of the State of New York and a Fellow of the American College of Physicians since 1920.

Dr. Wallace is survived by his widow, Mrs. Carrie Louise Wallace, and a daughter, Miss Ellen Louise Wallace, 146 E. 49th Street, New York, New York. It is with sincere regret his loss is recorded.

IRVING S. WRIGHT, M.D., F.A.C.P.,  
*Governor, Eastern Division, New York State*

## PROCEEDINGS OF THE BOARD OF REGENTS (ABRIDGED)

ATLANTIC CITY, N. J.

APRIL 26, 1958

Presiding: Richard A. Kern, M.D., President.

Secretary: Mr. E. R. Loveland.

Present: 21 Regents, and 2 guest Committee Chairmen.

RESOLVED, that the Board of Regents approve and appropriate a donation of \$100.00, during 1958, to the World Medical Association.

Recorded, that Dr. Danely P. Slaughter, Chairman of the Committee on Cancer of the American College of Surgeons, will serve as liaison member of the Cancer Committee of the A.C.P.

Recorded, that on appointment by President Richard A. Kern, Dr. William J. Erdman, II, (Associate), shall serve as official representative of this College on the American Registry of Physical Therapists.

Report received and recorded from Dr. LeRoy H. Sloan, retiring Chairman of the Joint Commission on Accreditation of Hospitals.

Dr. Julian Price, of the American Medical Association, has become Chairman, and Dr. Alex M. Burgess, of the A.C.P., Vice Chairman. Dr. Sloan, although retiring from the Commission, had agreed to remain as chairman of a special committee to make a further study of the general outline of policy. A seat on the Commission was declined to The American Academy of Obstetrics and Gynecology. Joseph Statler, Esq., of the Legal Department of the American Medical Association, had addressed the last meeting of the Joint Commission on the subject of "Medical Professional Liability," and had made the following points: 14% of doctors have been sued; the trend is in the way of more suits; certain parts of the country are particularly suit prone; 50% of suits are against physicians who are specializing; 29% are against Board certified men; younger physicians are not sued as often as older ones; 24% of suits are due to poor operative results; 20% of suits are due to poor medical results; incidence of suits is often due to careless comments by a physician, fellow practitioner, resident, intern, nurse, or other members of hospital personnel; some suits are due to a missed secondary condition or disease; geographical origin of suits is 67% in hospital and 24% in doctor's office; 50% are females. The Canadian Medical Association will terminate all interest in the Joint Commission as of December 31, 1958, and will initiate its own hospital accreditation plan. Dr. Frank Kelly, F.A.C.P., had been appointed successor to Dr. Sloan, as a member of the Joint Commission and of its Advisory Committee.

RESOLVED, that the Board of Regents record its indebtedness to Dr. LeRoy H. Sloan, retiring Chairman of the Joint Commission on Accreditation of Hospitals, for his long and devoted service to that organization on behalf of our College.

RESOLVED, that the Board of Regents reaffirm its previous action not to admit osteopaths to its Annual Sessions.

Report received and recorded from Dr. Arthur R. Colwell, Chairman of the Committee on Standards of Hospital Practice in Internal Medicine. After three years of exploration and survey, the Committee, while planning to continue the study to a logical conclusion, was ready to recommend specific action for the purpose of elevating standards of medical care in hospitals of this country. The Committee's considered judgment was:

- "(1) Hospital staff performance in diagnosis and medical treatment can best be judged by thorough analytical study of selected patients' records, both before and after discharge, and before and after death.
- "(2) Quality of Internal Medicine practice must be judged, not quality of record-keeping.
- "(3) This can best be done by selected members of each hospital staff. It is not feasible for visitors to do so routinely.
- "(4) In most hospital staffs there are physicians who are as anxious to improve standards of practice as any national agency. Indeed, they are better able to do so at frequent, regular intervals.
- "(5) A sampling process should be employed so that some records can be examined critically rather than many superficially.
- "(6) After preliminary experience to test operational methods in a smaller group of hospitals, appropriate and uniform routines should be set up in all hospitals that seek accreditation.
- "(7) The manner in which such an appraisal is conducted within each hospital should guide the Joint Commission in assessing quality of Internal Medicine Practice there. It is axiomatic that a staff which conscientiously and regularly appraises its own performance may be considered to practice medicine satisfactorily.

"Plan of Action: To convert these recommendations into concrete action, the Committee recommends that certain hospitals be offered a specific plan for local activation and systematic use. After approval by the Board of Regents, organizational and procedural details will be sent with a covering letter to about one hundred hospitals in which the Committee has discussed internal appraisal by systematic staff action.

"Conclusions: The Committee believes that the responsible physicians of this country are in by far the best position to police, judge, and improve the quality of their own work, and that they can do so effectively at local levels. The leadership furnished by special societies, like the Colleges, now exerted most directly in the Joint Commission on Accreditation, and by various education programs, can provide useful tools. Those can be employed locally to evaluate and improve standards, and nationally to judge how faithfully that is done."

RESOLVED, that the Board of Regents look with favor on the continuation of the project study.

RESOLVED, that the Committee on Standards of Hospital Practice in Internal Medicine be authorized to apply for a new Public Health Grant, to become effective on the expiration date of the present grant.

RESOLVED, that the Committee be advised by the Board of Regents to release any unexpended balance of its original appropriation, as and when a new grant is obtained.

Recorded, that Dr. R. Carmichael Tilghman had been duly appointed to, and had accepted, the post of Assistant Marshal of the College.

RESOLVED, that the prior regulation requiring all candidates for Mead Johnson Postgraduate Residency Scholarships be nominated by the College Governor for the state or area from which they come, be rescinded, and that such candidates be permitted to make application directly to the Executive Offices of the College.

Received and recorded was a report from Dr. Chester S. Keefer, A.C.P. representative on the Division of Medical Sciences, National Research Council.

Report received and recorded from the Secretary General, Dr. Wallace M. Yater, on the deaths of 47 Fellows and 12 Associates, since the last meeting of the Board;

also the Secretary General's report on 65 new Life Members since the last meeting of the Board.

*Elections to Membership:*

Upon the recommendation of the Committee on Credentials, Dr. Wallace M. Yater, Chairman, 310 candidates were elected to Associateship, 186 candidates were advanced to Fellowship, and 6 candidates were elected to Direct Fellowship.

37 Associates were dropped from the College Roster, because of failure to qualify for Fellowship in the maximal ten-year term prescribed by the By-Laws. 4 additional Associates resigned because of their preference to be so listed.

*Committee on Constitution and By-Laws:*

Dr. Walter L. Palmer, Chairman, reviewed, on behalf of the Committee, Article by Article and Section by Section of the Constitution and By-Laws, as proposed for revision and amendment. Specific action by resolution was taken on each Article and Section, either approving the recommendation, or altering it in certain specific instances.

On behalf of the Committee, Dr. Palmer presented a new plan for committee structures, duties and tenure of office. This plan provided for the classification of committees under:

- (a) Constitutional Committees;
- (b) Standing Committees of the Board of Regents;
- (c) Special Committees of the Board of Regents;
- (d) Standing Committees of the Board of Governors;
- (e) Appointments to, and Affiliations with, Special Societies or Organizations;
- (f) Representatives to Miscellaneous Societies.

*Manual of Rules, Policies and Procedures:*

President Kern presented an organizational outline of a proposed Manual of Rules, Policies and Procedures, a practical index of all features governing the operation of the College.

*Committee on Educational Program:*

Dr. Howard P. Lewis, Chairman, on behalf of the Committee, presented the following recommendations:

- (a) The President-Elect and the General Chairman-Elect should be ex officio members of the Committee on Program of the Annual Session, and should meet with that Committee;
- (b) The President-Elect should be empowered to appoint new Committee members in the autumn, before he assumes the Presidency (this refers only to the Committee on Program of the Annual Session);
- (c) The Program Committee shall formulate all its own procedures about obtaining material for the program. The Committee on Educational Program shall serve as an advisory committee only, and shall have no regulatory or dictatorial powers;
- (d) The Program Committee shall meet with the new President at the end of the Annual Session and probably again in August or September, as well as at the time of the annual autumn meeting of the Board of Regents;
- (e) Each member of the Committee on Program of the Annual Session should be active in helping to procure suggestive contributions for the program;

- (f) The General Chairman shall work with and attend the meetings of the Program Committee in a further effort to unify the plans for the whole program;
- (g) More and more effective publicity should be given to solicitations for contributions to the program—this by solicitation on behalf of the President, and, further, prominent announcements in the ANNALS OF INTERNAL MEDICINE.

By resolution the report was accepted.

Attest: E. R. LOVELAND,  
Secretary

## PROCEEDINGS OF THE BOARD OF GOVERNORS (ABRIDGED)

ATLANTIC CITY, N. J.

APRIL 27, 1958

Presiding: Doctor William C. Menninger, Chairman

Secretary: Mr. Edward R. Loveland

Present: 61 Governors, or their alternates;

Doctor Richard A. Kern, President;

Doctor Dwight L. Wilbur, Present-Elect.

### *Executive Committee Report:*

Doctor George C. Griffith, Secretary, reported on proceedings of two prior meetings of the Executive Committee, one held in Philadelphia, November, 1957, and one at Atlantic City, April 27, 1958.

1. The Committee on Nominations of the Board of Governors had presented nominations for committees and officers of the Board, subject to ratification later in this meeting.

2. The Executive Committee had recommended that prospective Governors be invited to attend the meeting of the Board of Governors at the Annual Session, but this year this was impossible because the Nominating Committee of the College had not progressed sufficiently far to release the names in advance.

3. Clarification of rules for admission to Fellowship had been discussed at length and Doctors Stetson, Kampmeier and Revercomb had agreed to discuss the matter later in this meeting.

4. The revision of the Governor's Handbook had been postponed, pending the publication of a more inclusive Manual of Rules, Regulations and Procedures by the College.

5. The Committee recommended that the manner of financing Regional Meetings be left to local Governors, rather than setting up a broad rule for all states and provinces.

6. The advisability of continuing the Reception by the Governors for new members was still unsettled, but such a Reception will be held at this Annual Session.

7. The Committee recommends that a proposal for membership be held, if necessary, for a period of two years instead of one, as is the present practice, in order that the candidate may be given a full opportunity to make corrections, and to fill in omissions.

### *Regional Meetings:*

The Secretary presented copies of the calendar of regional meetings held during 1957 and during 1958 to date, with a list of those scheduled for the next several



months. The Chairman observed a marked increase in attendance during the past year and proposed that those areas not now conducting regional meetings should take the matter under serious consideration. He also urged scheduling forthcoming regional meetings long in advance. 28 meetings with an attendance of 3,642 were held during the calendar year 1957.

*President-Elect Wilbur:*

Doctor Dwight L. Wilbur advised the Governors of the proposed revision and amendments to the Constitution and By-Laws being prepared, the organization of committee structures and functions and the preparation of a manual of rules, regulations and policies, more detailed information about which would be provided each Governor. He also informed the Governors of his own objectives in building an Annual Session program—scientific program, including clinical investigation, other clinical material, basic medical material as it refers and relates to the practice of Internal Medicine—which will insure the College Annual Sessions being the outstanding meeting in Internal Medicine in all aspects in this country.

*Postgraduate Course Program:*

Doctor Thomas M. McMillan, Chairman of the Committee on Postgraduate Courses, reviewed the program of the past year and presented the proposed schedules for the autumn of 1958 and the spring of 1959. The Postgraduate Course Program had continued to be outstandingly successful both in quality and attendance, the latter being for the year, July 1, 1957–June, 1958, 1,085.

The following Committee on Postgraduate Courses was appointed for the ensuing year:

Doctor Irving S. Wright, New York, N. Y.—Chairman  
Doctor Charles M. Caravati, Richmond, Va.  
Doctor A. Carlton Ernstene, Cleveland, Ohio  
Doctor Rudolph H. Kampmeier, Nashville, Tenn.  
Doctor Stacy R. Mettier, San Francisco, Calif.  
Doctor R. Carmichael Tilghman, Baltimore, Md.

There was a rising vote of thanks, amid applause, as a symbol of appreciation of the work performed by Doctor Thomas M. McMillan, retiring Chairman.

*President Kern:*

Doctor Richard A. Kern, President of the College, addressed the Governors briefly, commenting upon their great service to the College and thanking them for their cooperation during the past year.

*Associates Dropped:*

The Governors were provided with a list of five Associates who were resigning, and thirty-seven Associates who, according to the provisions of the By-Laws, had to be dropped at this meeting because of failure to qualify for advancement to Fellowship. In almost every instance, the underlying reasons were either failure to attain certification or failure to prepare acceptable material in the form of publications, theses or clinical reports. A few had failed to attend any Annual Session, as prescribed in the regulations.

*Practical Application of the Requirements for Membership:*

Doctor Richard Stetson, Doctor Rudolph H. Kampmeier and Doctor Paul H. Revercomb, the three members of the Committee on Credentials from the Board of

Governors, discussed in extended detail the requirements for Associateship, advancement to Fellowship and election to Direct Fellowship. They described the interpretation made by the Committee on Credentials of these requirements and remarks in the form of advice to each Governor.

RESOLVED, that it be the sense of the Board of Governors that the proposal of a candidate for Associateship may be held in the active file of the Committee on Credentials for two years, rather than one year as at present, to permit the candidate to complete requirements before being withdrawn.

*Principles Advocated by Individual Governors:*

1) No changes in the regulations be instituted which may in any sense violate the purpose of election to direct Fellowship. 2) Optional powers be delegated to the Committee on Credentials to promote Associates to Fellowship under certain circumstances, without Board certification—for instance, an Associate who attains a position of great distinction, such as full Professor of Medicine and Head of that Department, or election to membership in the Association of American Physicians. (These items were purely recommendations and did not represent formal actions.)

*Elections to the Executive Committee of the Board of Governors:*

Richard P. Stetson, Chairman  
George C. Griffith, Vice Chairman  
A. Carlton Ernstene, (1961)  
Charles M. Caravati, (1959)  
Irving S. Wright, (1959)  
Marshall N. Fulton, (1960)  
Carl V. Moore, (1960)  
Theodore C. Bauerlein, (1961)

*Financing Regional Meetings:*

1. These meetings should be financed in such a manner as not to require registration fees from non-members.
2. The central office assumes the expense of printing the programs and forms, postage and mailing of same, and for the traveling expenses of the Officer or other representative of the Board of Regents.
3. If registration fees are required by the local Governor, such fees should cover only expenses of the meeting, not be used as a source of building up a fund for other purposes.
4. Otherwise, Governors shall continue methods previously adopted by them.

*Mead Johnson Residency Scholarships:*

Heretofore, each Governor of the College had the privilege of nominating one candidate from his territory or jurisdiction. In operation that plan has not worked out feasibly. Often the Governor, not knowing what other candidates might come before him later, nominated the first candidate to the Committee on Fellowships and Scholarships, only to find later that he would have preferred to nominate another. Furthermore, in a large proportion of the cases, the Governor knew little or nothing about the candidate, and had no adequate machinery through which to investigate the candidate. The Board of Regents has concluded the most practical manner is to handle applications for the Mead Johnson Residency Scholarships in the same manner as other candidates for Fellowships and Scholarships; namely, that the application be made directly to the Executive Secretary, that no geographic limitation be made, and that the Committee on Fellowships and Scholarships employ its usual methods of investigation, including consultation with the Governors.

*Assistant Convocation Marshal:*

Doctor James W. Haviland, College Governor for Washington, was appointed to assist the Convocation Marshal, term expiring in 1961.

*Retiring Governors:*

There was a rising vote to express the gratitude of all to the following Governors who, at this Annual Session, would retire because of maximal term of service: Doctors John Minor (District of Columbia), Charles H. Drenckhahn (Southern Illinois), James O. Ritchey (Indiana), Thomas M. McMillan (Eastern Pennsylvania), Charles F. Morsman (South Dakota), Nils P. Larsen (Hawaii), and William C. Menninger (Kansas).

*Doctor Richard P. Stetson, New Chairman:*

Doctor Stetson was installed as Chairman of the Board of Governors, succeeding Doctor William C. Menninger.

Attest: E. R. LOVELAND,  
Secretary

PROCEEDINGS, JOINT EXECUTIVE SESSION, BOARD OF  
REGENTS AND BOARD OF GOVERNORS (ABRIDGED)

ATLANTIC CITY, N. J.

APRIL 27, 1958

Presiding: Dr. Richard A. Kern, President.

Secretary: Mr. E. R. Loveland.

Present: 22 Regents, 62 Governors, or their alternates, and 5 guests (Chairmen of A.C.P. special committees).

RESOLVED, that this Joint Session be legalized for joint action.

The Minutes of previous meetings of the Boards were reviewed by the Secretary and approved.

*Communications and Reports:*

Reports were received and recorded from the General Chairman, Dr. James F. Gleason, 39th Annual Session; from the Chairman of the Committee on Fellowships and Scholarships, confirming the granting of the Southern California Traveling Scholarship for 1958 to Dr. Thomas R. Kidd, (Associate), Lynwood, Calif., for study in Mexico City; from Dr. Alex M. Burgess, re the Joint Commission on Accreditation of Hospitals; and from the Chairman and Director of the Committee on Standards of Hospital Practice in Internal Medicine, Dr. Arthur R. Colwell and Dr. G. Karl Fenn, respectively.

Dr. Colwell reported that after three years of exploration and survey, his Committee was now ready to recommend specific action. He predicted that as a result of the work, with appropriate agencies following through, standards of medical care in the hospitals of this country will be definitely elevated. During the first two years of this study the Committee had endeavored to locate simple objective formulae by the use of which outside observers might assess and compare the quality of Internal Medicine practice in hospitals. Techniques used in Internal Medicine are much more difficult to quantitate than those in surgery. Some of the more promising of such items for Internal Medicine would be autopsy rates, consultation ratios, staff meeting performance, use of standard nomenclature and terminology, and pathology and radiology facilities; but the best of them can be used only for screening purposes, not for individual hospital appraisals. They might be used in the future to locate borderline performance, for critical study by other methods.

Dr. Fenn, Director of the Study, then made a more detailed report and outlined how the survey had been conducted. 214 hospitals had been asked to cooperate; 105 were surveyed during the first year of the Study and 109 had been approached for the first time. 25 members of the College, all men of experience and judgment, devoted time to a survey of 105 hospitals, with each member of the Committee joining in the effort. All material resulting from the survey had been assembled, discussed by the Committee, and the results had been prepared for publication in the ANNALS OF INTERNAL MEDICINE and for distribution to A.C.P. members and to interested hospitals.

Thereupon Dr. Colwell presented the following conclusions and plan of action:

"1. Hospital staff performance in diagnosis and medical treatment can best be judged by thorough analytical study of selected patients' records, both before and after discharge, and before and after death.

"2. The quality of Internal Medicine practice must be judged, not the quality of the record-keeping.

"3. This can best be done by selected members of each hospital staff. It is not feasible for outsiders to do so routinely.

"4. In most hospital staffs there are physicians who are as anxious to improve standards of practice as any national agency. Indeed, they are better able to do so and at frequent, regular intervals.

"5. A sampling process should be employed so that some records can be examined critically rather than many superficially.

"6. After preliminary experience to test operational methods in a smaller group of hospitals, appropriate and uniform routines should be set up in all hospitals that seek accreditation.

"7. The manner in which such an appraisal is conducted within each hospital should guide the Joint Commission in assessing the quality of Internal Medicine as practiced there. It is axiomatic that a staff which conscientiously and regularly appraises its own performance may be considered to practice medicine satisfactorily.

"To convert these opinions into concrete action we now recommend that certain hospitals be offered a specific plan for local activation and systematic use. Organizational and procedural details have been prepared by the Director, approved by the Committee, and recently circulated in printed form entitled 'Medical Care Appraisal Plan.' A copy is attached to this report—we will not read it now unless requested. If approved by the College, copies will be sent with a covering letter to about 100 hospitals which have been visited and in which we have discussed internal appraisal by systematic staff action. It will also be offered to about 30 others represented by various surveyors and committee members. We estimate that about one-half of them will accept our offer and that most of those will follow through intelligently and consistently. If this is correct, some 40 to 50 hospitals will try the Plan out in practice, sending reports of individual chart appraisals to us monthly so that we may observe their efforts. In addition, they will be in a position to tell us as the study continues, first, what faults and omissions exist, and, second, what the impact has been regionally. At a future time we might recommend specific procedures to the Joint Commission. The Commission may be interested to observe the pilot group of hospitals in action in the meantime.

"Administrative: Doctors Amidon, Bailey and Puestow have been added to the Committee to replace Doctors Kinsman and Morgan, resigned, and Doctors Blankenhorn and Ferris, deceased. Original Committee members still serving are Doctors Eisele, Luckey and the Chairman. Officers of the College should determine whether this Committee should continue. It is our recommendation that it should.

"Dr. G. Karl Fenn has served one year half time as Director of the project, and is willing to continue if needed. It is the Committee's opinion that he is. His office, files and full-time secretary are located at 122 S. Michigan Avenue, Chicago, the headquarters for the project.

"We believe that the responsible physicians of this country are in by far the best position to police, judge and improve the quality of their own work and that they can do so effectively at local levels. Leadership furnished by special societies like the Colleges, now exerted most directly in the Joint Commission and by various educational programs, can provide useful tools. These can be employed locally to evaluate and improve standards, and nationally to judge how faithfully that is done."

#### *Committee on Public Relations:*

In accordance with recommendations of the Committee, the following actions were taken:

RESOLVED, that the American College of Physicians appoint a representative to attend the meeting of the Committee on Preparation for General Practice, at Chi-



cago, May 17, in accordance with the request of the American Medical Association (Dr. Howard Wakefield was thereafter appointed by the President).

RESOLVED, that the President of the American College of Physicians shall appoint as an observer only, an A.C.P. representative to the Joint Committee to Study Paramedical Areas in Relation to Medicine. (Dr. Edward C. Rosenow, Jr., Pasadena, was appointed by the President.)

Resolutions were adopted waiving the dues of two Fellows who had retired from active medical work, also that the resignations of six Associates be accepted.

#### *The American Board of Internal Medicine:*

Dr. Thomas M. Durant, Chairman, reviewed in some detail the continuing work of the Board and delineated the number of examinations, the number of candidates, the number of sub-specialty Board examinations, etc.

IBM records have been established at the Board's headquarters, listing some 10,000 candidates from 1945 to date. Findings from analyses made are of chief value to the Residency Review Committee, in connection with evaluation of training programs. Presently the study is aimed at determining what types of programs are likely to produce the best results from the standpoint of Board examinations.

Dr. Durant reiterated the policy of the Board to require two years of practice, following completion of formal training of a type that will give a maturing influence in the broad field of medicine. The board has observed that all too frequently candidates are not broadly prepared when they come up for examination. In many instances their training has been in very narrow, restricted fields. The Board proposes to insist that a certain minimum of broad training and broad contact with Internal Medicine be had by those who are now doing work in a limited field. He referred to a new plan for admission to the Board examinations, the so-called Plan H, which is designed to take care of certain special problems for men in academic medicine, applications to be initiated by the professor of medicine for men in his department who are unusually brilliant and have had a broad experience in Internal Medicine. One such examination had been given for this group; there were 16 candidates, 15 of whom passed.

#### *American Society of Internal Medicine:*

Dr. Robert Wilson, Chairman, and Drs. Joseph D. McCarthy and Charles M. Caravati, members of the A.C.P. Liaison Committee, reported on their attendance at the A.S.I.M. Council meetings. Dr. Wilson stated that the Society has three propositions to be acted upon at its current meeting, to wit: (1) each state society or group shall establish printed fee schedules; (2) commercial carriers of various types of insurance will be asked to recognize the service of internists; (3) Blue Shield will be asked to recognize internists and their fee schedule. Dr. Wilson expressed the opinion that the Society is trying to do a good job; that the sphere of interest and activity should not conflict with any of the activities of the A.C.P.

A request from the Society for special space for news items in the ANNALS OF INTERNAL MEDICINE was referred to the Committee on Public and Professional Relations and to the Editorial Board.

#### *Committee on Constitution and By-Laws:*

Dr. Walter L. Palmer, Chairman, reviewed the efforts and progress of the Committee toward presenting for revision and amendment the Constitution and By-Laws of the College, before the next Annual Session, in 1959. The Committee had succeeded in crystallizing fairly extensive amendments, had systematically revised

the structure and duties of all committees of the College and had laid the foundations for the drafting of a comprehensive handbook of rules, policies and procedures of the College.

*Transactions of the Board of Governors:*

Dr. William C. Menninger, Chairman, reviewed the transactions of the Board of Governors at its meeting earlier in the day. A proposal by Dr. Richard Stetson, member of the Committee on Credentials from the Board of Governors, dealing with amendments to the By-Laws concerning election of candidates to Direct Fellowship, was, by resolution, referred to the Committee on Constitution and By-Laws.

*Matters Referred to the Executive Committee of the Board of Regents:*

- (1) Consideration of necessary appropriations and expenditures by the College to continue its program with the Joint Commission on Accreditation of Hospitals;
- (2) Consideration of the report of the A.C.P. observer at the meeting of the Joint Committee to Study Paramedical Areas in Relation to Medicine.

*Manual of Rules, Policies and Procedures:*

President Kern, particularly for the benefit of the Governors, reviewed the plans and purposes of the proposed "Manual of Rules, Policies and Procedures," read the proposed preface, outlined the various proposed chapters, and solicited suggestions from all Officers, Regents and Governors.

Attest: E. R. LOVELAND,  
Secretary

# PROCEEDINGS OF THE BOARD OF REGENTS (ABRIDGED)

ATLANTIC CITY, N. J.

MAY 2, 1958

Presiding: Dr. Dwight L. Wilbur, President.

Secretary: Mr. E. R. Loveland.

Present: 21 Regents, and the Chairman of the A.C.P. Committee on Cancer.

The Secretary presented a brief review of the Minutes of the preceding meeting which was accepted and approved.

## *Elections of Secretary General and Treasurer:*

Dr. Wallace M. Yater, Washington, D. C., was re-elected Secretary General. Dr. Thomas M. Durant, Philadelphia, Pa., was elected Treasurer.

RESOLVED, that the President of the College be requested to transmit in writing to Dr. William D. Stroud, an expression of the great appreciation of the Board of Regents for the extraordinary service he has rendered the College as Treasurer for the past 26 years.

## *Recommendation Recorded re Tenure of Office of Secretary General and Treasurer:*

The Board of Regents and the Committee on Constitution and By-Laws were requested to take under consideration the placing of a limitation of the term of office of the Secretary General and of the Treasurer.

## *Selection of Future Annual Session Sites:*

Formal invitations were presented by Denver, Colo., Dallas, Tex., Bal Harbour, Fla., Miami Beach, Fla., San Francisco, Calif., and New York City, by the respective College Governors and officers of the Convention Bureaus of those areas. After careful analysis, San Francisco was selected for the 1960 Annual Session, April 4-8; and Dr. Roberto Escamilla, F.A.C.P., was appointed General Chairman.

The Americana Hotel, Bal Harbour, Fla., was selected for the 1961 Annual Session, May 8-12; appointment of a General Chairman was deferred.

RESOLVED, that in the future those presenting invitations for the Annual Sessions of the College be interviewed by, and the whole problem involved in selecting meeting places be carefully considered by, a special Committee on Annual Sessions, to be appointed by the President, and their recommendations brought to the Board of Regents.

## *Committee on Cancer:*

Dr. Samuel G. Taylor, III, Chairman, made an oral report on behalf of this Committee, on its meeting of April 30, 1958.

RESOLVED, that as a means of improving patient care in cancer, the College shall urge its members to participate actively in the Cancer Registry in their local areas. This might be emphasized through an editorial on the papers dealing with cancer on the Annual Session program of the College.

RESOLVED, that the President of the College invite the American Cancer Society to appoint a consulting member of the A.C.P. Committee on Cancer, a physician from its organization, preferably one of their staff physicians; expenses of his travel shall be borne by that Society.

*Committee on Finance and Budgets:*

Dr. Herbert K. Detweiler, Chairman, reviewed the auditor's report for 1957 operations and attached a copy for recording in the Minutes. (The auditor's report has been published in a previous issue of this journal.) Dr. Detweiler emphasized the following points:

- 1) The Endowment Fund increased during 1957 \$29,967.52 to a total of \$520,777.89.
- 2) The General Fund increased \$70,671.82 to a total of \$872,169.00.
- 3) The Gross Assets of the College for 1957 reached \$1,495,915.51.
- 4) Life membership fees, 1957, \$13,501.66, a slight decline.
- 5) Net income from investments was \$24,582.48, as compared with \$23,097.31 in 1956.

## 6) General Fund data:

	1957	1956	1955
Total Income .....	\$595,744.82	\$518,138.07	\$469,412.74
Total Expenses ...	499,752.00	424,241.91	349,347.93
	<u>\$ 95,992.82</u>	<u>\$ 93,896.16</u>	<u>\$120,064.81</u>

- 7) The net profit on General Fund security transactions was \$10,709.68.
- 8) Comparative figures on significant accounts:

	1957	1956	1955
Annual Dues .....	\$ 94,650.45	\$ 90,855.60	\$ 81,716.81
Initiation Fees .....	22,480.00	18,425.00	15,735.00
ANNALS, Subs. ....	178,593.79	168,817.15	159,203.56
ANNALS, Adv. ....	166,049.05	115,162.55	98,508.56
ANNALS, Expenses ...	228,002.38	203,910.52	181,408.88
Annual Session, Cost ..	29,811.38	36,585.64	984.81

The Board of Regents approved investments recommended by Drexel and Co., investment counselors for the College, said recommendations having been previously approved by the Committee on Finance and Budgets.

On the recommendation of the Committee on Finance and Budgets, budgets for 1958-1959, \$9,110.00 for the President, and \$13,025.00 for the General Chairman of the Annual Session (Chicago), were approved with the understanding that these are provisional budgets, subject to amendment at the autumn meeting of the Board of Regents.

The Finance Committee had made a careful study of the dues and initiation fees structure of the College, and made the unanimous recommendation that no change be made at the present time, this recommendation being approved by formal resolution of the Board of Regents.

RESOLVED, that in accordance with the recommendation of the Committee on Finance and Budgets, the Board of Regents appropriate \$100.00 as a donation to the World Medical Association for 1958.

RESOLVED, that in accordance with the recommendation of the Committee on Finance and Budgets, Dr. Arthur R. Colwell, Chairman of the Committee on Standards of Hospital Practice in Internal Medicine, be informed that in accordance with a communication from the authorities of the National Institutes of Health, the current balance of \$17,250.00 shall be regarded as a return of funds advanced by the College to the Committee; further, that the Board of Regents shall approve of

the continuation of this study contingent upon the College being voted a further grant for this study as a result of an application now pending.

RESOLVED, that the report of the Committee on Finance and Budgets be accepted as a whole.

RESOLVED, that the President and members of the Board of Regents express to Dr. Herbert K. Detweiler their sincere thanks and appreciation for outstanding service to the College as Governor, Regent, Vice President, and Chairman of the Committee on Finance and Budgets, those services covering a period of many years.

*Retirement and Pensions of College Employees:*

The work of this Committee had been previously concluded and approved by the Board of Regents. The re-writing of the retirement and pensions booklet of the College will be concluded and submitted for approval to the Executive Committee of the Board of Regents at its June, 1958, meeting.

*Committee on Insurance:*

Dr. Joseph D. McCarthy, Chairman, apprised the Board of Regents that the underwriters of the Professional Liability Group Plan of the College, Lloyd's of London, had proposed an increase in premium rates for all coverages up to \$50/150,000; for coverages above these amounts the premium would be somewhat reduced. The Committee was working with the Group Insurance Administrators in an effort to solve the problem, either by obtaining another carrier or the development of a different plan. The Committee felt the increases were in no manner justified, because the experience with the College members had been extremely favorable.

The Committee had observed certain problems in connection with the Health and Accident Plan: (1) Failure on the part of the member to notify the insurance office of his disability, as required in the policy. The policy requires notification within 20 days; some members had failed to report their disability for months after its onset, or even after return to active work. Such delays often render investigation difficult. (2) A certain number of members look upon a Health and Accident policy as a sort of retirement plan upon reaching age 65. It appears that an occasional member, approaching age 65, with a gradual loss of practice, may decide to stop practicing altogether and to go on benefits of his Health and Accident insurance. The Committee pointed out that such a procedure is entirely contrary to the purposes and objectives of the College insurance plan. (3) Some policy holders, after a term of full disability, return to partial duty as a sort of rehabilitation. The College Health and Accident policy definitely states that coverage is only for "total disability." No partial disability benefits are provided. Any unwarranted advantages taken of the Health and Accident Plan eventually will affect the whole plan and reduce its financial status.

RESOLVED, that the Board of Regents supports the opinions and recommendations of the Committee on Insurance, namely, that infringements upon the intent and purposes of the College Health and Accident Plan be resisted.

RESOLVED, that the report of the Committee on Insurance be approved as a whole.

*Liaison Committee, American Society of Internal Medicine:*

In November, 1957, the Board of Regents set up a Liaison Committee, headed by Dr. Robert Wilson, Chairman, to attend as guests the Council Meetings of the American Society of Internal Medicine. Dr. Wilson, with other members of his Committee, reported upon their observations on the meetings of the Society at Atlantic City and stated that the College had been requested to afford the Society



some space in the College News Notes Section of the ANNALS OF INTERNAL MEDICINE for announcements of the Society's activities.

RESOLVED, that the subject of utilization of the News Notes section by the American Society of Internal Medicine be referred to the Committee on Public and Professional Relations and to the Editorial Board.

*Appointment of Committees:*

In accordance with provisions of the Constitution and By-Laws, and/or regulations adopted to govern committees and their structures, all Standing and Special Committee personnel were appointed (the official list already published in a previous issue of this journal).

RESOLVED, that the President be authorized to appoint a Committee on Administrative Structure, consisting of three members of the Board of Regents, to study administrative policies and changes in relation to the College administrative setup.

President Wilbur strongly advocated consideration of the appointment of a Director of Public and Professional Relations.

President Wilbur announced the next meeting of the Executive Committee of the Board of Regents, San Francisco, June 27, 1958; of the Board of Regents and of Committees, at Philadelphia, November 14, 15, and 16, 1958.

Attest: E. R. LOVELAND,  
*Secretary*

## COLLEGE NEWS NOTES

### ACTIVITIES OF MEMBERS

*The members of the College are requested to send news items to the Editor of the News Notes of the ANNALS OF INTERNAL MEDICINE, 4200 Pine St., Philadelphia 4, Pa., reporting important activities which have occurred concerning either themselves or other members of the College in their area. Newsworthy items include: advancement in academic rank; important new appointments; presentations before state, regional, national or international societies; new locations; special honors, and election to office in a state, regional, or national organization.*

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### BOOKS DONATED TO THE COLLEGE LIBRARY OF PUBLICATIONS BY MEMBERS

The College gratefully acknowledges receipt of the following books from members of the College to the Memorial Library of Publications by Members of the College:

John Martin Askey, M.D., F.A.C.P., Los Angeles, Calif., *SYSTEMIC ARTERIAL EMBOLISM*, published by Grune & Stratton, New York and London, 1957, 157 pages.

Joseph J. Bunim, M.D., F.A.C.P., Chevy Chase, Md., *TRANSACTIONS OF THE FIRST NATIONAL CONFERENCE ON RESEARCH AND EDUCATION IN RHEUMATIC DISEASES (1954)*, and *SECOND NATIONAL CONFERENCE (1957)*, published by Arthritis and Rheumatism Foundation in coöperation with National Institute of Arthritis and Metabolic Diseases, Public Health Service, U. S. Department of Health, Education and Welfare, New York, N. Y., and Washington, D. C., 122 pages and 156 pages. Also received were *BULLETINS ON RHEUMATIC DISEASES, VOLUMES I TO VIII*, published by the Arthritis and Rheumatism Foundation, New York, N. Y., 1950-58.

Henry D. Diamond, M.D., F.A.C.P., New York, N. Y., *THE MEDICAL MANAGEMENT OF CANCER*, published by Grune & Stratton, New York and London, 1958, 179 pages.

Esmond R. Long, M.D., M.A.C.P., Pedlar Mills, Va., *THE CHEMISTRY AND CHEMOTHERAPY OF TUBERCULOSIS*, published by The Williams & Wilkins Co., Baltimore, Md., 1958, 450 pages.

J. Arthur Myers, M.D., F.A.C.P., Minneapolis, Minn., *TUBERCULOSIS: EVERY PHYSICIAN'S PROBLEM*, published by Charles C Thomas, Springfield, Ill., 1957, 290 pages.

## COMING REGIONAL MEETINGS

<u>State</u>	<u>City</u>	<u>Date</u>	<u>Governor(s)</u>	<u>Official Guest(s)</u>
New Jersey	Newark	November 12, 1958	Edward C. Klein, Jr.	Dwight L. Wilbur, President E. R. Loveland, Exec. Sec.
North Carolina	Winston-Salem	December 4, 1958	Elbert L. Persons	E. R. Loveland, Exec. Sec. Robert Wilson, Regent
Puerto Rico	San Juan	December 20, 1958	Federico Hernandez-Morales	Robert Wilson, Regent
Colorado	Colorado Springs	January 16-17, 1959	Constantine F. Kemper	Philip S. Hensch, Regent
Ohio	Cincinnati	January 22, 1959	A. Carlton Ernestine	Dwight L. Wilbur, President
Eastern Pennsylvania	Philadelphia	January 23, 1959	William A. Jeffers	Dwight L. Wilbur, President
Alberta, Manitoba and Saskatchewan, Canada	Banff, Alberta, Can.	February 7, 1959	Percy H. Sprague Francis A. L. Mathewson	
Southern California	Palm Springs	February 7-8, 1959	George C. Griffith	Dwight L. Wilbur, President
Nebraska	Omaha	March 7, 1959	Edmond M. Walsh	Dwight L. Wilbur, President
Kansas	Wichita	March 20, 1959	Fred J. McEwen	
Virginia	Hot Springs	March 21, 1959	Charles M. Caravati	Dwight L. Wilbur, President

## A.C.P. POSTGRADUATE COURSES

*Autumn-Winter, 1958-1959*

By the time of the appearance of this news item, the first four courses on the Autumn schedule will have been concluded. Course No. 1, THE PHYSIOLOGICAL BASIS OF INTERNAL MEDICINE, at Duke University, under the directorship of Dr. Eugene A. Stead, Jr., F.A.C.P., had a very adequate registration, although it was not over-subscribed. A number of younger physicians registered for this Course particularly for review purposes just prior to the examinations of the American Board of Internal Medicine. Course No. 2, SELECTED SUBJECTS IN INTERNAL MEDICINE, at the Mayo Clinic and Foundation, under the directorship of Drs. Edgar V. Allen, F.A.C.P., James C. Cain, F.A.C.P., L.O. Underdahl, F.A.C.P., and L. Emmerson Ward, F.A.C.P., was also a popular Course, exceedingly well administered, but the registration did not exceed the capacity of 150. Course No. 3, GASTRO-ENTEROLOGY, at the University of Michigan, under Dr. H. Marvin Polard, F.A.C.P., had a comparatively small registration. This was disappointing in view of the eminence of the guest faculty, as well as that of the University of Michigan. Course No. 4, CONGENITAL HEART DISEASE, at the Johns Hopkins University and Hospital, under the direction of Dr. Helen B. Taussig, F.A.C.P., was over-subscribed (40 maximal) very shortly after the Postgraduate Bulletin was issued. This Course always has an appeal far beyond its capacity.

Courses yet to be given are: Course No. 5, INTERNAL MEDICINE, ESPECIALLY THERAPEUTICS: University of Illinois College of Medicine, Chicago, Ill.; Harry F. Dowling, M.D., F.A.C.P., Director, James A. Campbell, M. D., (Associate), and Ford K. Hick, M.D., F.A.C.P.; January 12-16, 1959. Course No. 6, CURRENT RESEARCH IN ENDOCRINOLOGY: National Institutes of Health, Bethesda, Md.; Delbert M. Bergenstal, M.D., F.A.C.P., Joseph J. Bunim, M.D., F.A.C.P., and Luther L. Terry, M.D., F.A.C.P., Co-directors; February 2-4, 1959. Course No. 7, RECENT ADVANCES IN CARDIOVASCULAR DISEASES: The Mount Sinai Hospital, New York, N. Y.; Charles K. Friedberg, M.D., F.A.C.P., Director; February 9-13, 1959. Course No. 8, RECENT ADVANCES IN INTERNAL MEDICINE: Pennsylvania Hospital, Philadelphia, Pa.; Garfield G. Duncan, M.D., F.A.C.P., Director, and Robert J. Gill, M.D., (Associate) Co-director; February 23-27, 1959.

Each of these last four Courses is still open for registration although Course No. 7 has proved extremely popular and it is anticipated that the full maximum of 150 registrants will shortly be reached. It would appear that there are adequate facilities in the other three remaining Courses to accommodate both members of the College and non-members.

The full details, faculty personnel and detailed outlines of Courses No. 5, No. 6, and No. 8 were not printed in the formal Postgraduate Bulletin but special bulletins for each of these three Courses have now been published and are available on request to the Executive Secretary, American College of Physicians, 4200 Pine Street, Philadelphia 4, Pa.

*Courses Proposed for Spring of 1959*

The A.C.P. Committee on Postgraduate Courses is attempting to set up future programs long in advance. The following schedule of Spring, 1959, Courses, is tentative in some instances.

PRACTICAL REHABILITATION PROCEDURES FOR THE INTERNIST: New York University College of Medicine and Bellevue Medical Center; Howard A. Rusk, M.D., F.A.C.P., Director; three days, April 13-15, 1959.

PRACTICE OF GLOBAL MEDICINE IN THE U. S. A.: Cornell University Medical College and New York Hospital, New York, N. Y.; Benjamin H. Kean, M.D., (Associate), Director; three days, early April or mid-May, 1959.

INTERNAL MEDICINE: University of Colorado Medical Center, Denver, Colo.; C. Wesley Eisele, M.D., F.A.C.P., Director; five days, June 15-19, 1959.

RECENT DEVELOPMENTS IN INTERNAL MEDICINE: University of Cincinnati College of Medicine and the Cincinnati General Hospital, Cincinnati, Ohio; Richard W. Vilter, M.D., F.A.C.P., John R. Braunstein, M.D., F.A.C.P., Director and Assistant Director, respectively; five days, June 22-26, 1959.

CARDIAC ARRHYTHMIAS: Philadelphia General Hospital, Philadelphia, Pa.; Samuel Bellet, M.D., F.A.C.P., Director; three days (dates not yet established).

GASTRO-ENTEROLOGY: Tulane University School of Medicine and Louisiana State University School of Medicine, New Orleans, La.; G. Gordon McHardy, M.D., F.A.C.P.; (dates not yet established).

The Postgraduate Bulletin for these Courses will be published and distributed to all members of the College, and to others requesting the same, during January, 1959.

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#### NEW YORK UNIVERSITY POSTGRADUATE MEDICAL SCHOOL OFFERS COURSE IN ALLERGY

The New York University Postgraduate Medical School offers a course in Allergy covering respiratory as well as skin allergy. Morning sessions will be devoted to laboratory instruction in the preparation and standardization of protein extracts. Afternoon sessions in the large out-patient clinic deal with the diagnosis and treatment of asthma, hay fever, and other allergic diseases, the technic of skin tests and hypsensitization, and the role of focal infections in allergy. The course will be conducted from December 1-19, 1958. For additional information, write Office of the Associate Dean, New York University Postgraduate Medical School, 550 First Avenue, New York 16, N. Y.

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#### ALUMNI ASSOCIATION OF THE NEW YORK UNIVERSITY COLLEGE OF MEDICINE SPONSORS MEDICAL SEMINAR CRUISE

The Medical Seminar Cruise sponsored by the Alumni Association of the New York University College of Medicine will be conducted for 14 days, starting February 21, 1959. The transatlantic liner, *M. S. Italia*, will sail to the Caribbean, visiting San Juan, St. Thomas, Ciudad Trujillo, Cap Haitien, and Nassau. For information, write Allen Travel Service, Inc., 565 5th Ave., New York 17, N. Y.

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#### COURSE IN PRACTICAL ELECTROCARDIOGRAPHY

The University of Texas, Postgraduate School of Medicine, announces a course in PRACTICAL ELECTROCARDIOGRAPHY to be held in Houston, Tex., December 15-19, 1958. This course will emphasize Spatial Vector-Electrocardiography. Dr. Robert F. Grant of the National Heart Institute, one of the foremost authorities in this field, will be the J. J. and Una Truitt Lecturer for the course. In addition to the evening formal lectures, there will be daytime electrocardiographic interpretation practice sessions. Write Grant Taylor, M.D., Office of the Dean, The University of Texas Postgraduate School of Medicine, Houston 25, Tex.



## SPECIAL FELLOWSHIPS IN INDUSTRIAL MEDICINE

The United States Atomic Energy Commission has announced the availability of special fellowships in industrial medicine for the year 1959-60. The Fellowships are open to men and women physicians who are citizens of the United States, who have graduated from an approved College of Medicine at least two years prior to beginning tenure of the Fellowship and who are licensed to practice medicine in one of the States or Territories of the United States. Successful candidates will be required to have a full F.B.I. background investigation and to be cleared by the Commission prior to awarding of a Fellowship.

The training program consists of two parts: 1. An academic year, with lecture and laboratory instruction in the practice of industrial medicine, industrial hygiene, industrial toxicology, nuclear physics, biophysics, biostatistics, and the public health aspects of occupational medicine. 2. An in-plant training year, in which the Fellow may be assigned to one or more of the medical departments of the major operating plants and laboratories under the direction of the Atomic Energy Commission.

Fellowship applications for the academic year 1959-60 should be filed before January 1, 1959. It is expected that the selection of Fellows will be made on or before February 1, 1959, but Fellowships may be assigned at any time at the discretion of the Committee. The tenure of the Fellowship will be arranged to begin about July 1, 1959, if there is a Summer Session at the school selected for training. Otherwise, it will begin with the opening of the school in the Fall.

The stipend during a Fellowship or academic year is \$5,000. The sum of \$350 is added to the total stipend for a wife, and \$350 more is added for each dependent child. Tuition and laboratory fees, which would be required of students of similar university status, will be paid for academic courses. Certain other expenses incident to the work of the Fellow will be paid when approved by the Committee. During the in-plant year, the stipend is paid by the plant. A minimum of \$7,500 is recommended.

The Fellowship year of academic training may be taken at a university offering an approved graduate course in industrial medicine which can provide special training facilities in the health problems associated with the Atomic Energy Program. The latter assumes a sufficient contact with the Atomic Energy Commission activities to give proper direction to this special instruction. The in-plant year of training will be given at A.E.C. contractor installations such as Oak Ridge, Tennessee; Los Alamos, N. M.; Richland, Wash., and other areas where there are major industrial medical units.

Write, A.E.C. Fellowships in Industrial Medicine, Atomic Energy Project, University of Rochester, School of Medicine and Dentistry, Rochester 20, N. Y., Attention: Dr. Henry A. Blair.

## COURSES OF THE UNIVERSITY OF PENNSYLVANIA GRADUATE SCHOOL OF MEDICINE

The University of Pennsylvania Graduate School of Medicine recently announced a series of short and part-time courses for 1958-59. Included in the full-time courses are the following: "Ballistocardiogram," Dr. Isaac Starr, Director, June 15-17, 1959, tuition \$60.00; "Diabetes and Hypoglycemia," Dr. Joseph T. Beardwood, Jr., F.A.C.P., Director, March 23-25, 1959, tuition \$75.00; "Hemolytic Disease of the Newborn," Dr. Thomas R. Boggs, Jr., Director, June 4-5, 1959, tuition \$50.00; "Industrial Medicine," Dr. John P. Hubbard, F.A.C.P., Director, for information contact Dean's Office; "Peripheral Vascular Diseases," Dr. Samuel Lisker, Director, June 25-27, 1959, tuition \$75.00, and "Practical Pediatric Hematology," Dr. Irving J. Wolman, Director, June 1-3, 1959, tuition \$75.00.

Part-time courses available in the future are: "Dermatology," Mondays, 3:30 to 4:20 p.m., January 26 to May 4, 1959, tuition \$20.00; "Clinical Hematology," date to be announced, tuition \$20.00; "Clinical Allergy," date to be announced, tuition \$20.00, and "Medical Jurisprudence and Forensic Medicine," Thursdays, 5:00 to 6:00 p.m., January 29 to April 16, 1959, tuition \$40.00; write, Dean's Office, University of Pennsylvania Graduate School of Medicine, Philadelphia 4, Pa.

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#### GRANTS FOR STUDY OF STERILITY

The American Society for the Study of Sterility announces the availability of the Ortho and Carl G. Hartman grants-in-aid of \$500 each available in 1959. Applications should be sent to Dr. Robert B. Wilson, Secretary of the Awards Committee, American Society for the Study of Sterility, 200 1st St., S.W., Rochester, Minn. The applications must include five copies of an outline of the research project for which aid is requested and they must be submitted before December 31, 1958.

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#### AMERICAN COLLEGE OF CHEST PHYSICIANS ESSAY CONTEST

The American College of Chest Physicians offers three cash awards to winners of a 1959 Prize Essay Contest, open to undergraduate medical students throughout the world. The first prize will be \$500, the second \$300 and the third, \$200. Essays may be written on any phase of diagnosis and treatment of chest diseases (cardio-vascular or pulmonary). The contest will close on April 15, 1959. For information, write American College of Chest Physicians, 112 E. Chestnut St., Chicago 11, Ill.

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#### THE ALLERGY FOUNDATION OF AMERICA SUMMER SCHOLARSHIPS

The Allergy Foundation of America has awarded 22 summer quarterly scholarships in the amount of \$500 each to medical students from medical schools throughout United States and Canada. These awards were intended to encourage young students to broaden their knowledge in the field of allergic diseases by research and clinical training. Members of the College who served as members of the Scientific and Educational Council which recommended the appointments included the following Fellows: Dr. Richard A. Kern, past President of A.C.P., Professor of Medicine, Emeritus, Temple University Medical School, Philadelphia, Pa.; Dr. Marion B. Sulzberger, Chairman, Department of Dermatology and Syphilology, New York University Post-Graduate Medical School, New York, N. Y.; and Dr. Samuel M. Feinberg (Liaison Member), Director, Allergy Research, Northwestern University Medical School, Chicago, Ill.

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#### PEDIATRIC FELLOWSHIPS

The Department of Pediatrics of the University of Colorado School of Medicine offers fellowships in pediatrics in allergy, hematology, infectious diseases, and premature and newborn nursery procedures. Fellowships are for one or two years and are available to graduates of approved schools of medicine who have completed at least one or more years of hospital training. Write Dr. Henry K. Silver, University of Colorado Medical Center, 4200 E. 9th Ave., Denver 20, Colo.

## AMERICAN HEART ASSOCIATION DEVELOPS RESEARCH KINESCOPES

To stimulate the interest of young people in research careers, four kinescopes showing the methods, objectives, achievements and rewards to be gained in entering the investigative field, are available from local Heart Associations throughout the country for showings to students and educators. Selected from the educational television series "Decision for Research," presented by the American Heart Association and its affiliates and NBC-TV, the programs were filmed from a 13-weekly half-hour series presented over stations of the Educational Television Network and many NBC-TV stations.

The programs are designed to acquaint high school and junior college students with the nature of medical and biological research as actually conducted by leading cardiovascular investigators in their laboratories through discussions and demonstrations of various phases of investigations now under way. The following subjects are included: "A Problem in Diagnosis"; "Intruder in the Lifestream"; "The Nature of the Enemy," and "Pathways to the Future." Write American Heart Association, 44 E. 23rd St., New York 10, N. Y.

## AMERICAN SOCIETY OF INTERNAL MEDICINE

Dr. Elbert L. Persons, F.A.C.P., Durham, N. C., A.C.P. Governor for North Carolina and President of the American Society of Internal Medicine, announces that Mr. Robert L. Richards, Harrisburg, Pa., who has been an Assistant to the Executive Director of the Medical Society of the State of Pennsylvania for the past 11 years, has accepted the position of Executive Secretary of the American Society of Internal Medicine, 350 Post St., San Francisco 8, Calif. He will assume his duties before January 1, 1959.

## PERSONAL NOTES

## VIRGINIA MEMBERS HONOR TWO FELLOWS

On March 1, 1958, at the Virginia Regional Meeting of the College, a special program was presented in honor of Dr. James Morrison Hutcheson, F.A.C.P., Richmond, Va., and to Dr. Walter B. Martin, M.A.C.P., Norfolk, Va. Each of these men has been a Governor, a Regent, and a Vice President, and has made notable contributions to internal medicine and to medicine on a national scale. They have always shown an active interest in and participated in all of the activities of the College, both in Virginia and in the nation. The Fellows and Associates of the College in the State presented to each one an appropriately engraved silver tray "as a token of their esteem and of their appreciation for the services they rendered internal medicine, and particularly to the American College of Physicians. These men are still active in practice and continue vitally interested in the College in every way. They are considered the Deans of internal medicine in Virginia. To them, all of us owe a great deal, and the College, particularly, has benefited much by their devotion and their leadership."

Dr. Tinsley R. Harrison, F.A.C.P., Birmingham, Ala., was honored recently at a special testimonial dinner attended by a group of distinguished physicians and friends in Atlantic City, N. J.

Dr. Walter A. Bloedorn, F.A.C.P., Washington, D. C., was reelected President of the National Board of Medical Examiners.

Dr. William J. Grace, F.A.C.P., New York, N. Y., participated in the program of the 3rd Spanish-American Medical-Psychological Congress held in Rio de Janeiro, Brazil, August, 1958. He discussed the subject, "Life Stress and Gastroenterological Diseases," and "The Results of Treatment in Ulcerative Colitis."

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Dr. Rudolph H. Kampmeier, F.A.C.P., Nashville, Tenn., College Governor for Tennessee, recently was elected Chairman of the Department of Medicine at Vanderbilt University School of Medicine, succeeding Dr. Hugh Morgan, M.A.C.P., who has retired. Dr. Morgan served several years as a Regent of the American College of Physicians and was its President in 1947-48.

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Dr. Nathaniel E. Reich, F.A.C.P., Brooklyn, N. Y., addressed the following Far Eastern institutions on various phases of heart disease: Japan Medical Association, Tokyo, August 8; Chaialonkorn University Faculty of Medicine and Siriraj University of Medical Sciences, both of Thailand, August 19; Royal Thai Air Force Medical Service in Bangkok, August 20; Philippine Heart Association, Manila, August 22, and University of Santo Tomas Faculty of Medicine, Manila, August 23.

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Three Fellows of the College participated in the Scientific Assembly of the West Virginia Heart Association held in Fairmont, W. Va., October 10, 1958. Dr. Sol Katz, Washington, D. C., discussed "General Principles of Treatment," and Drs. A. D. Kistin, Beckley, W. Va., and W. C. Stewart, Charleston, W. Va., discussed the subject, "Problems in West Virginia."

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Dr. Alfred H. Hill, F.A.C.P., San Antonio, Tex., was elected Vice President of the Texas Neuropsychiatric Association at a recent meeting held at Houston, Tex.

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The July-August issue of LABORATORY INVESTIGATION, the official journal of the International Academy of Pathology, was dedicated to Dr. Howard T. Karsner, F.A.C.P., Washington, D. C., Medical Research Advisor to the Surgeon General of the Navy. The issue included a profile by Dr. James E. Ash, F.A.C.P., Washington, D. C., Consultant, Armed Forces Institute of Pathology, and 14 scientific papers published by Dr. Karsner's former associates and assistants. Dr. Karsner was also elected a member of the Board of Directors of the Alpha Omega Alpha, honor medical society, at a meeting in San Francisco, Calif., June 25, 1958.

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Dr. T. D. Spies, F.A.C.P., Birmingham, Ala., was elected President of the American Therapeutic Society at its recent annual meeting in San Francisco, Calif.

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Five Fellows of the College were named officers of the American Trudeau Society at a meeting held May 23, 1958. Members included were: Drs. Daniel E. Jenkins, Houston, Tex., President; Roger S. Mitchell, Jr., Denver, Colo., President-Elect; Byron F. Francis, Seattle, Wash., Vice President; Ejvind P. K. Fenger, Oak Terrace, Minn., Secretary-Treasurer, and Theodore L. Badger, Boston, Mass., immediate past President, a member of the Executive Committee.

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Four Fellows of the College were elected officers of the American Diabetes Association recently. They are: Drs. Alexander Marble, Boston, Mass., President;

Franklin B. Peck, Sr., Indianapolis, Ind., Second Vice President; Edward P. Sheridan, Denver, Colo., Secretary, and Thomas P. Sharkey, Dayton, Ohio, Treasurer.

Drs. William A. Lambeth, Jr., (Associate), and Charles H. Reid, Jr., F.A.C.P., were promoted to Assistant Professors of Clinical Internal Medicine at The Bowman Gray School of Medicine of Wake Forest College, Winston-Salem, N. C.

Dr. R. O. Muether, F.A.C.P., St. Louis, Mo., was elected Treasurer of the Missouri State Medical Association at a recent meeting of the Association.

Dr. John H. Killough, F.A.C.P., Columbia, Mo., has been recently appointed Coördinator of Departments of Internal Medicine in 22 Veterans Administration Hospitals in the area adjacent to Atlanta, Ga.

Dr. Michael Bernreiter, F.A.C.P., Kansas City, Mo., discussed the subject, "Tietze's Syndrome and the Differentiation of Chest Pain," at the Fifth International Congress on Diseases of the Chest in Tokyo, Japan, September 7-10, 1958.

Rear Admiral B. W. Hogan, F.A.C.P., Surgeon-General, U. S. Navy, Washington, D. C., was recently elected a member of the Board of Managers of the Woman's Hospital of Philadelphia, Pa.

Dr. Francis C. Wood, F.A.C.P., Philadelphia, Pa., has been recently reelected Secretary of the Association of American Physicians.

Dr. Raoul Fournier, Sr., Mexico, D. F., was elected President of the Mexican Association of Gastroenterology at a meeting of the Association held June 25, 1958.

Lt. Colonel Christian Gronbeck, Jr., F.A.C.P., (MC, USA, Director, Division of Medicine, Walter Reed Army Institute of Research, Washington, D. C., participated in an eight-week Fellowship in Parasitology and Tropical Medicine, under the sponsorship of the Louisiana State University. He spent four weeks in Costa Rica and ten days each in the Republic of Panama, El Salvador and Guatemala.

Major Milton E. Rubini, (Associate), (MC), USA, has been assigned as Chief of the Metabolic Section at the Tropical Research Medical Laboratory, San Juan, Puerto Rico.

Lt. Colonel William H. Meroney, III, (Associate), (MC), USA, has been assigned as Commanding Officer of the Tropical Research Medical Laboratory, San Juan, Puerto Rico. He was recently appointed Associate Editor of the journal, METABOLISM.

Dr. George Morris Piersol, M.A.C.P., Emeritus Dean and Professor of Medicine and Physical Medicine and Rehabilitation, University of Pennsylvania Graduate School of Medicine, Philadelphia, Pa., and past President and Secretary-General of



the American College of Physicians, was the main speaker at the Annual Conference of the American Institute of Ultrasonics in Medicine held in Philadelphia, August 23, 1958. His subject was "The Expanding Frontier of Physical Medicine."

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Several members of the College participated in the 4th Annual Meeting of the Wisconsin Society of Internal Medicine, Janesville, Wis., September 20, 1958. Included were: Dr. Robin N. Allin, F.A.C.P., Madison, "Disseminated Lupus Erythematosus with Diabetes—A Report of Two Cases"; Dr. J. LeRoy Sims, F.A.C.P., Madison, "Intrahepatic Obstructive Jaundice"; Dr. G. E. Gutmann, F.A.C.P., Janesville, "C P C Case Presentation"; Dr. Leslie G. Kindschi, F.A.C.P., Monroe, "C P C Discussion," and Dr. W. S. Middleton, M.A.C.P., Washington, D. C., "The First W. S. Middleton Lecture."

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Dr. Richard A. Kern, F.A.C.P., past President of the American College of Physicians and Emeritus Professor of Medicine at the Temple University School of Medicine, Philadelphia, Pa., recently announced his resignation from the Lower Merion Township Board of Health. Dr. Kern served for 20 years on the Board and was its President for the past several years.

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Dr. Katharine R. Boucot, F.A.C.P., Philadelphia, Pa., addressed the 3rd International Congress of Photofluorography in Stockholm, Sweden, on August 18, 1958. Her subject was "The Detection of Early Bronchial Cancer."

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Dr. Harold L. Israel, F.A.C.P., Philadelphia, Pa., presented a paper on "Changing Patterns in Pulmonary Disease," at the Oxford University, England, and discussed the subject, "Sarcoidosis in the United States" at the British Commonwealth Chest Conference in London during July, 1958. He also served as a staff member for the Postgraduate Course on "Modern Approach to Pulmonary Disease" at the City of Hope at Duarte, Calif., June 14-16, 1958.

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Three Fellows from the State of Georgia were among those physicians who recently received certificates honoring them for 50 years of practice in the field of medicine. Included were: Drs. W. J. Cranston, Augusta; George L. Echols, Milledgeville, and Guy G. Lunsford, Atlanta.

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Dr. Julius L. Wilson, F.A.C.P., Professor of Medicine, University of Pennsylvania School of Medicine, Philadelphia, Pa., recently was elected to the Board of Directors of the William B. Lake Foundation. The Foundation was established to give financial assistance primarily to professional and semi-professional victims of tuberculosis.

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Dr. Wilhelm Raab, F.A.C.P., Professor of Experimental Medicine at the University of Vermont College of Medicine, Burlington, Vt., returned recently after a year as Fulbright Research Professor at the University of Innsbruck, Austria. While there, he directed, under combined grants from the U. S. Public Health Service, the Vermont Heart Association and the Innsbruck University Association, a research program concerning the neurovegetative regulation of cardiac dynamics in physically highly-conditioned Tyrolean mountaineers, as compared with that of sedentary Americans. He also delivered 27 lectures in Austria, Germany, Switzerland, Italy, the Soviet Union and Finland.

Dr. William J. Mogabgab, F.A.C.P., Associate Professor of Medicine, Tulane University School of Medicine, New Orleans, La., discussed his research activities on cold-like illnesses at the meeting of the Society of American Bacteriologists held recently in Chicago, Ill.

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Dr. Grace A. Goldsmith, F.A.C.P., Professor of Medicine, Tulane University School of Medicine, New Orleans, La., discussed the subject, "Nutritional Pitfalls of Prosperity," at the Borden Centennial Symposium on Nutrition held in New York, N. Y., recently.

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Dr. William W. Engstrom, F.A.C.P., Associate Professor of Medicine at Marquette University School of Medicine, Milwaukee, Wis., was named the Francis D. Murphy Professor and Chairman of the Department of Medicine on August 15. Dr. Engstrom assumes the post held by Dr. Francis D. Murphy, F.A.C.P., who will remain a Professor in the Department and active in the teaching program of the Medical School.

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Dr. Milton Henry Clifford, F.A.C.P., in the spring of 1958 removed from Boston, Mass., to Cincinnati, Ohio, where he is Second Vice President of The Union Central Life Insurance Company, with the responsibilities of delineating and administering all matters concerned with the selection and maintenance of Life Insurance Risks, both in the Medical Division and in the Underwriting Division. Dr. Clifford is also doing active teaching on a part-time basis at the University of Cincinnati College of Medicine, and holds an appointment at the Cincinnati General Hospital. Dr. Clifford started private practice in Boston in 1935; he was an Associate Medical Director of the New England Mutual Life Insurance Company, Associate Physician at the Massachusetts General Hospital, and an Instructor in Medicine at Harvard Medical School.

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Brigadier General Elbert DeCoursey, F.A.C.P., (MC), USA, Commandant of the Army Medical Service School at Brooke Army Medical Center, Fort Sam Houston, Tex., was reappointed recently to the Council on Research and Education of the American Hospital Association. The appointment is for three years.

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Dr. Laurence R. Coke, F.A.C.P., Winnipeg, Manitoba, Can., has been named a Governor of the American College of Chest Physicians.

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Brigadier General Carl W. Tempel, F.A.C.P., (MC), USA, has joined the Office of the Army Surgeon General in Washington, D.C., as Chief of the Professional Division. General Tempel was former Commanding Officer of the Valley Forge Army Hospital, Phoenixville, Pa.

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Four Fellows of the College participated in the Annual Meeting of the American Heart Association in San Francisco, Calif., October 24-26, 1958. Dr. David Adlersberg, New York, N. Y., served as Chairman of the symposium on "Genetic Factors in Cardiovascular Disease"; Dr. Caroline B. Thomas, Baltimore, Md., discussed the subject, "Hypertension"; Dr. Louis N. Katz, Chicago, Ill., was Moderator on a panel on "Emotional Factors in Atherosclerosis," and Dr. A. C. Corcoran, Cleveland, Ohio, was Moderator of a panel on "Hypertension and Atherosclerosis."

Brigadier General Thomas W. Mattingly, F.A.C.P., (MC), USA, Washington, D. C., retired on August 31, 1958, after 24 years of active duty in the Army. He has assumed new duties as Director of Medical Education at the Washington Hospital Center and will have a clinical service in the Department of Medicine and serve as Cardiac Consultant. He will continue to serve as Consultant in Cardiology to the Walter Reed Army Hospital, the Armed Forces Institute of Pathology, and the White House.

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Dr. J. H. Hilsman, (Associate), Atlanta, Ga., has been elected President and Dr. David E. Hein, (Associate), Atlanta, Ga., was named Secretary-Treasurer of the newly-formed Georgia Society of Internal Medicine.

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Dr. S. C. Shepard, F.A.C.P., Tulsa, Okla., was named President at a recent meeting of the Oklahoma Society of Internal Medicine.

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Dr. Robert A. Matthews, F.A.C.P., Philadelphia, Pa., was appointed Head of the Department of Psychiatry of The Jefferson Medical College of Philadelphia on July 1, 1958. He succeeds Dr. Baldwin L. Keyes, F.A.C.P., who was named Emeritus Professor. Dr. Matthews was former State Commissioner on Mental Health and had been a Professor of Psychiatry at the College since 1956.

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Dr. Walter P. Bitner, F.A.C.P., Harrisburg, Pa., was elected Secretary-Treasurer at a recent meeting of the Pennsylvania Radiological Society.

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Dr. William J. Erdman, II, (Associate), Philadelphia, Pa., was elected President of the Pennsylvania Academy of Physical Medicine and Rehabilitation at a recent meeting of the organization.

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The University of Washington School of Medicine, Seattle, Wash., has named the first appointee, Bernard M. Wagner, M.D., former Assistant Professor of Pathology, University of Pennsylvania School of Medicine, to the newly-created Robert L. King Chair of Cardiovascular Research which has been endowed by the Washington State Heart Association. The sum of \$15,000 per year will be made available to the University to employ a research scientist in the field of heart diseases and to assist in financing his activities. This represents the first endowed chair to be established at the University and it honors Dr. Robert L. King, F.A.C.P., Seattle, Wash., who is a past President of the American Heart Association and of the Washington State Medical Association.

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Dr. Henry D. Diamond, F.A.C.P., New York, N. Y., was a guest speaker at the 20th Mid-Summer Radiological Conference of the Rocky Mountain Radiological Society held in Denver, Colo., August 14-16, 1958.

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Dr. J. Gordon Barrow, F.A.C.P., Atlanta, Ga., has been named the President-Elect of the Georgia Heart Association. He recently addressed the 6th Annual Meeting of the Northeast Georgia Chapter of the Association in Athens, Ga.

Dr. Edgar R. Pund, F.A.C.P., Augusta, Ga., retiring President of the Medical College of Georgia, was honored recently at a reception in Augusta, Ga.

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Dr. Claude-Starr Wright, F.A.C.P., has been named Professor of Medicine at the Medical College of Georgia, Atlanta, Ga.

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Dr. A. Calhoun Witham, (Associate), has been promoted recently to Associate Professor of Medicine at the Medical College of Georgia, Atlanta, Ga.

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Dr. Gerald W. Halpenny, F.A.C.P., Montreal, Que., Can., was named Honorary Treasurer of the Canadian Medical Association at a recent meeting.

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Dr. Carl V. Moore, F.A.C.P., Busch Professor of Medicine and Head of the Department of Internal Medicine, Washington University School of Medicine, St. Louis, Mo., and A.C.P. Governor for Missouri, has been recently appointed a member of the National Advisory Arthritis and Metabolic Diseases Council. His appointment is until 1962.

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Dr. S. Spafford Ackerly, F.A.C.P., Chairman of the Psychiatry Department, University of Louisville School of Medicine, Louisville, Ky., recently was awarded a Guggenheim Fellowship for research study of the function of the brain.

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Dr. Boni J. DeLaureal, F.A.C.P., New Orleans, La., was recently elected Second Vice President of the Louisiana State Medical Society.

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Five Fellows of the College from the State of Virginia were awarded Distinguished Service Medallions at a recent annual meeting of the Virginia Heart Association. Included were: Drs. R. Earle Glendy, Roanoke; Reno R. Porter, Richmond; Paul D. Camp, Jr., Richmond; Ernest G. Scott, Lynchburg, and R. Bryan Grinnan, Jr., Norfolk.

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Dr. William A. Pratt, (Associate), Rutland, Vt., was elected Temporary Chairman, and Dr. Robert E. O'Brien, (Associate), Winooski, Vt., was named Chairman of a committee to contact charter or founding members of the newly organized Vermont Chapter of the American Society of Internal Medicine at a meeting held in Middlebury in June, 1958.

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Three Fellows of the College from New York, N. Y., were participants in the 2nd Annual Postgraduate Week of the New York Academy of Medicine held October 13-17, 1958, in New York City. The men and the subjects they discussed were: Dr. Irving S. Wright, "The Diagnosis and Management of Cerebral Vascular Diseases"; Dr. Walsh McDermott, "Influenza and Upper Respiratory Infections," and Dr. William Goldring, "Glomerulonephritis and Pyelonephritis."

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Dr. Lee D. Cady, F.A.C.P., Manager, Veterans Administration Hospital, Houston, Tex., was awarded a Certificate of Honorary Membership for "distinguished

service in the field of physical and mental rehabilitation," at the Annual Convention of the Association for Physical and Mental Rehabilitation held in Atlantic City, N. J., July 20, 1958.

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Dr. Charles W. Dunn, F.A.C.P., Collegeville, Pa., recently closed his Philadelphia office and will confine his practice to a limited number of private patients and to his duties as Visiting Endocrinologist and Chief of the Department at the following institutions: Delaware State Hospital, Farnhurst, Del.; Governor Bacon Health Center, Delaware City, Del., and the Hospital for the Mentally Retarded, Stockley, Del.

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Major Nestor M. Hensler, (Associate), U.S.A.F. (MC), was assigned to the U.S.A.F. Hospital at Scott Air Force Base, Ill., in July, 1958. He was formerly assigned to the Parks Air Force Base, Calif.

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Colonel R. Howard Lackay, (Associate), U.S.A.F. (MC), has been assigned as Commander of the U.S.A.F. Dispensary at Ramstein Air Base, Germany, following the completion of his training at the Basic Medical Science Course, University of Pennsylvania School of Medicine, Philadelphia, Pa.

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Major General Harry G. Armstrong F.A.C.P., U.S.A.F. (MC), retired after almost 30 years of military service on September 1, 1958. He is a pioneer in aviation and space medicine and a former Surgeon General of the U.S.A.F. In February, 1949, while he was Commandant of the U.S.A.F. School of Aviation Medicine, General Armstrong established the Department of Space Medicine, the first laboratory of its kind. He is author of the book entitled, PRINCIPLES AND PRACTICES OF AVIATION MEDICINE, which is used throughout the world as a standard textbook on aviation medicine. In 1940, he received the Collier Trophy in recognition of his research activities. This trophy, given annually for the greatest contribution to aviation, was presented to General Armstrong by President Roosevelt for his achievements "in the field of aviation medicine generally, and pilot fatigue in particular." General Armstrong has received many military awards, both national and international. He has been active in many national medical societies and is a former Governor of the American College of Physicians.

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Colonel Benjamin A. Strickland, Jr., F.A.C.P., U.S.A.F. (MC), formerly Surgeon of the Technical Training Air Force at Gulfport, Miss., has been assigned as Surgeon of the Air Defense Command at Offutt Air Force Base, Nebr.

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Major Ray F. Fitch, (Associate), U.S.A.F. (MC), has been transferred from the Keesler Air Force Base, Miss., to the U.S.A.F. Hospital at Elmendorf Air Force Base, Alaska.



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OBITUARIES

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The College records with sorrow the deaths of the following members. Their obituaries will appear later in these columns.

Dr. William Van Valzah Hayes, F.A.C.P., Greenwich, Conn., June 27, 1958  
Dr. David Milton Kurschner, (Associate), New York, N. Y., April 26, 1958  
Dr. Thomas McCance Mabon, F.A.C.P., Pittsburgh, Pa., June 12, 1958  
Dr. John Alexander MacDonald, F.A.C.P., Interlaken, N. Y., June 17, 1958  
Dr. Douglas Dickinson Martin, F.A.C.P., Tampa, Fla., May 24, 1958  
Dr. Frank J. Milloy, Sr., F.A.C.P., Phoenix, Ariz., August 5, 1958  
Dr. Bernard Sutro Oppenheimer, F.A.C.P., New York, N. Y., June 10, 1958  
Dr. Raymond Griswold Taylor, F.A.C.P., Los Angeles, Calif., June 28, 1958

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## DR. JAMES I. BALTZ

Dr. Baltz was born on September 23, 1896, in Washta, Iowa. He obtained his B.A. and M.A. degrees from Cornell College, Mount Vernon, Iowa, in 1919, and his M.D. degree from the State University of Iowa College of Medicine in 1927. His postgraduate training had included work in gastroscopy at the University of Chicago in 1939.

Dr. Baltz had been a member of the Henry Ford Hospital staff for a period of thirty years and, at the time of his death, was Senior Associate in the Division of Gastroenterology. In a statement by Dr. John G. Mateer of the hospital, it was commented that it was the unanimous opinion of their hospital staff that Dr. Baltz was a man of remarkable character, tireless energy and industry. His humility, intellectual honesty, his completely unselfish and unbounded interest in his patients and his conscientious follow-up care of them typified his life. Interestingly enough, during his thirty years of practice, he never failed to make his Sunday morning rounds for two or three hours.

Dr. Baltz maintained a vital interest in people, as well as ability in teaching residents and providing medical aid to his colleagues. After administering to his own patients, everyone knew that he was readily available to see any other physician's patient who presented diagnostic or therapeutic problems. It was, therefore, no surprise that he had developed a remarkable degree of clinical acumen. As a teacher of medicine he was unusually effective and practical. Although he was mainly interested in organic medicine, he never evaded the handling of functional problems. Again according to Dr. Mateer, Dr. Baltz exemplified to a remarkable degree one of Sir William Osler's principles of living, namely "humility in life's successes and courage in its crises."

Dr. Baltz had been a member of the Medical Advisory Board No. 3, Michigan Selective Service, during World War II. His professional memberships consisted of the American Medical Association and the Wayne County Medical Society, in addition to the American College of Physicians of which he became a Fellow in 1942.

Dr. Baltz is survived by his widow, Mrs. Margaret J. Baltz, of 18231 Santa Barbara Drive, Detroit, Michigan.

H. M. POLLARD, M.D.

## DR. HARRY ALBERT HOLLAND

Dr. Harry Albert Holland, F.A.C.P., died August 9, 1958, having retired from practice a year previously because of limitations imposed by coronary heart disease. He was born in DuBois, Pennsylvania, June 14, 1893. Following his graduation from the University of Pennsylvania School of Medicine in 1917, he served an internship in the Allegheny General Hospital, Pittsburgh and then entered the practice of medicine in a coal mining community in western Pennsylvania.

Subsequently, he pursued postgraduate training in Philadelphia, including service in the office of Dr. David Riesman. For thirty-five years he engaged in the practice of internal medicine in Chestnut Hill, Pennsylvania, during which time he was elected to serve terms as both Chief of Medicine and as Chief of Staff in the Chestnut Hill Hospital. During World War I he was on the Staff of the Base Hospital, Camp Jackson, Columbia, South Carolina.

Dr. Holland was regarded with affection and respect by both his colleagues and his patients. He maintained high standards in the practice and teaching of medicine. In addition to membership in the county, state and national medical societies, he became a Fellow of the American College of Physicians in 1941.

He is survived by his wife, Mrs. Alice P. E. Holland, living at Mantoloking (Box 207), New Jersey, two sons, a daughter, a brother and eight grandchildren.

WILLIAM A. JEFFERS, M.D., F.A.C.P.,

Governor for Eastern Pennsylvania

## DR. CLARENCE HOGUE INGRAM, SR.

Dr. Clarence Hogue Ingram, Sr., (Associate), Pittsburgh, Pennsylvania, died in that city on February 28, 1958. He was born in 1872 and received his M.D. degree from the Western University of Pennsylvania, Medical Department (University of Pittsburgh), in 1897. He was a former staff member of the Western Pennsylvania and Pittsburgh Hospitals. During World War I he served as a Major in the Medical Corps of the United States Army as Chief of Medical Service of the Evacuation Hospital No. 32 in France.

His memberships included the following: the American Medical Association; the Medical Society of the State of Pennsylvania; the Military Surgeons of the United States Army; the Allegheny County Medical Society and the Pittsburgh Academy of Medicine. He became an Associate of the American College of Physicians in 1925.

Dr. Ingram is survived by his wife, Mrs. Ella MacWilliams Ingram, 4716 Ellsworth Avenue, Pittsburgh 13, Pennsylvania.

## DR. RUTH ALLEN KOONS

Dr. Ruth Allen Koons (Pereny), F.A.C.P., died of carcinoma in the University Hospital, Columbus, Ohio, on June 9, 1958. She was born in Perry County, Ohio, on August 5, 1905. In 1927 she received the A.B. degree from Ohio State University and, in 1950, the degree of Doctor of Medicine from the College of Medicine of the same University. After an internship and residency training at White Cross Hospital, she entered private practice in Columbus, limiting her work mainly to cardiology. In 1949 she was appointed to the faculty of Ohio State University and, at the time of her death, had advanced to the position of Assistant Clinical Professor of Medicine (Cardiology). She was a member of the Senior Attending Staff of the White Cross Hospital and Assistant Director of the Cardiological Clinic of Children's Hospital. She had published a number of articles on cardiological subjects and was

especially interested in traumatic heart disease. In 1957 she was the recipient of a Certificate of Meritorious Service from the Central Ohio Heart Association.

Dr. Koons was an active member of a number of medical organizations, including: the American Medical Association; Ohio State Medical Association; American Medical Women's Association; Women's Medical Club of Columbus of which she was Vice President in 1940; Columbus Academy of Medicine; American Federation for Clinical Research; American Association for the Advancement of Science, and the American Heart Association. She became a Fellow of the American College of Physicians in 1941.

Dr. Koons' penetrating clinical ability and her sympathetic kindness for those under her care were richly deserving of the admiration, respect and love she enjoyed from her colleagues, patients and students. She is survived by her husband, Andrew Pereny, R.F.D. No. 3, Westerville, Ohio, and a sister.

A. CARLTON ERNSTE, M.D., F.A.C.P.,  
Governor for Ohio

#### DR. JOHN HAMMOND PALMER

The death of Dr. John Hammond Palmer, F.A.C.P., occurred on August 9, 1958, at the Royal Victoria Hospital in Montreal. His death was due to pulmonary embolism.

At the time of his death, Dr. Palmer was: Associate Professor of Medicine at McGill University Faculty of Medicine; Physician in Charge of the Cardiology Service at the Royal Victoria Hospital, and Chief Consultant in Cardiology to the Department of Veteran's Affairs for the District of Montreal and at the Queen Mary Veteran's Hospital where he had been largely responsible for the organization and maintenance of the high standards of the Cardiology Service. He had played a leading role in the organization of the National Heart Foundation of Canada, and was to have attended as a Canadian delegate, the Congress of the World Cardiac Association in Brussels in September.

Dr. Palmer received his degree of M.D., C.M. from McGill in 1921 and, after internship at the Royal Victoria Hospital and some years in practice in British Columbia, did postgraduate work abroad in Vienna and London in 1930-31. He returned to London to study cardiology under Sir John Parkinson from 1934 to 1936.

In the first World War, Dr. Palmer interrupted his studies in medicine to go overseas with the Canadian Army Medical Corps and, after several years of active service in the field, he was granted a commission as Surgeon Probationer in the Royal Naval Volunteer Reserve, serving afloat until the end of the war.

In 1940, he joined No. 14 Canadian Hospital as Major in charge of Medicine, and after service with that unit in England and in Italy, he was made Chief Consultant in Medicine to the Canadian Army, with the rank of Brigadier. At the end of the War, he returned to civilian life and practice in Montreal.

Dr. Palmer was a member of many medical societies, local, national and international; he was a Fellow of the Royal College of Physicians of London; a Fellow in Medicine of the Royal College of Physicians and Surgeons of Canada, and a Fellow of the American College of Physicians. His interests were not confined to his profession; he had a deep interest in the arts, be it music, painting, or literature, and he was an active member of the Royal Montreal Curling Club where his prowess in the game was well recognized.

He is survived by his wife, the former Olive Woodburn, who lives at 629 Grosvenor Avenue, Westmount, Quebec, Canada, and by three married daughters.

WALTER DE M. SCRIVER, M.D., F.A.C.P.,  
Governor for Quebec

## DR. JOE EDMUND WALKER

Dr. Joe Edmund Walker, F.A.C.P., who was one of the pioneers in the development of the practice of internal medicine in the Southern California area, died June 29, 1958, in Beaumont, California.

He was born in San Saba, Texas, in 1900. After graduating from the University of California Medical School in 1924, he completed his hospital training at the Seaside Memorial Hospital in Long Beach. At the completion of his graduate training, he became associated with Dr. Walter Smallwood in private practice in that city. This association grew and developed until 1943, when Dr. Walker was called to active duty with the Armed Forces. He served with the Navy Medical Department as a Lieutenant Commander and was given an honorable discharge in 1945 with the rank of Captain.

Following his naval career, he again entered into private practice in Long Beach in 1945. At that time he organized and developed the Walker Medical Group with which he was associated at the time of his death.

Dr. Walker was a Diplomate of the American Board of Internal Medicine and a Fellow of the American College of Physicians. He was past Chief of Staff and President of the Board of Directors of Seaside Memorial Hospital. He was one of the founding members of the attending staff at Harbor General Hospital in Torrance, California. He was a member of the local, state, and national medical societies.

Dr. Walker was highly respected and admired by his colleagues and gave freely of his time and energy both in the teaching and conducting of his private practice. He was a man known to thousands, not only as a competent physician, but as a highly-respected friend. He will be missed greatly by patients and friends alike.

Dr. Walker is survived by his wife, Willmay Walker of Banning, California, daughters, Mrs. Louann Privett, Banning, California and Mrs. Dorothy Berzman, San Rafael, California, and five grandchildren.

GEORGE C. GRIFFITH, M.D., F.A.C.P.,  
Governor for Southern California

## COLLEGE NEWS NOTES

### NEW A.C.P. LIFE MEMBERS

The College acknowledges with pleasure Dr. Lewis Cohen, Huntington Woods, Mich., and Dr. Malcolm W. Miller, Philadelphia, Pa., as new Life Members.

The College gratefully acknowledges receipt of the following books from members of the College to the Memorial Library of Publications by Members of the College:

- Robert H. Bayley, M.D., F.A.C.P., Oklahoma City, Okla., *BIOPHYSICAL PRINCIPLES OF ELECTROCARDIOGRAPHY*, published by Paul B. Hoeber, Inc., New York, N. Y., 1958, 237 pages.
- Michael Bernreiter, M.D., F.A.C.P., Kansas City, Mo., *ELECTROCARDIOGRAPHY*, published by J. B. Lippincott Company, Philadelphia, Pa., and Montreal, Quebec, Can., 1958, 134 pages.
- Herman A. Dickel, M.D., F.A.C.P., Henry H. Dixon, F.A.C.P., Portland, Ore. (co-author Gerhard B. Haugen, M.D.), *A THERAPY FOR ANXIETY TENSION REACTIONS*, published by The Macmillan Co., 1958, 110 pages.
- Samuel M. Feinberg, M.D., F.A.C.P., Chicago, Ill., *LIVING WITH YOUR ALLERGY*, published by J. B. Lippincott Co., Philadelphia, Pa., and New York, N. Y., 1958, 190 pages.
- Jack W. Fleming, M.D., (Associate), Pensacola, Fla., *A PRIMER ON COMMON FUNCTIONAL DISORDERS*, published by Little, Brown and Company, Boston, Mass., and Toronto, Ont., Can., 1958, 174 pages.
- Solomon Katzenelbogen, M.D., F.A.C.P., Bethesda, Md., *ANALYZING PSYCHOTHERAPY*, published by Philosophical Library, Inc., New York, N. Y., 1958, 126 pages.
- Charles E. Kossman, M.D., F.A.C.P., New York, N. Y., *ADVANCES IN ELECTROCARDIOGRAPHY*, published by Grune & Stratton, New York, N. Y., 1958, 280 pages.
- Ralph H. Kunstadter, M.D., F.A.C.P., Chicago, Ill., *CARE OF THE PREMATURE INFANT* (co-author Evelyn C. Lundeen, R. N.), published by J. B. Lippincott Co., Philadelphia, Pa., and Montreal, Que., Can., 1958, 367 pages.
- Howard A. Rusk, M.D., F.A.C.P., New York, N. Y., *REHABILITATION MEDICINE*, published by The C. V. Mosby Company, St. Louis, Mo., 1958, 572 pages.
- Morris M. Weiss, M.D., F.A.C.P., Louisville, Ky., *BEDSIDE GUIDE FOR THE MANAGEMENT OF THE HEART PATIENT* (revised 1957), published by The Kentucky State Department of Health for the Guidance of Hospital Internes, Residents and Practitioners of Medicine, Louisville, Ky., 34 pages.
- Irving S. Wright, M.D., F.A.C.P., New York, N. Y., *CEREBRAL VASCULAR DISEASES—TRANSACTIONS OF THE SECOND CONFERENCE HELD UNDER THE AUSPICES OF THE AMERICAN HEART ASSOCIATION, PRINCETON, N. J., JANUARY 16-18, 1957*, published by Grune & Stratton, New York and London, 1958, 224 pages.

### AMERICAN BOARD OF NUTRITION

The American Board of Nutrition will hold the next examinations for certification as a Specialist in Human Nutrition, during the week of April 12-18, 1959, in Atlantic City, New Jersey. Candidates who wish to be considered for these examinations should forward applications to the Secretary's Office not later than March 1.



Application forms may be obtained from the Secretary, Robert E. Shank, Department of Preventive Medicine, Washington University School of Medicine, Euclid and Kingshighway, St. Louis, Missouri.

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#### A.C.P. DIRECTORY SUPPLEMENT, 1958

The last complete Directory of the American College of Physicians was published in the autumn of 1955. A Supplement thereto was published in the autumn of 1956 and one in 1957. This 1958 Supplement includes all alterations and additions to the 1955 Directory since its publication.

A free copy of the 1958 Supplement will be sent, on request, to any member of the College who purchased a 1955 Directory, or to any Medical School or Library which already has a copy of the 1955 Directory.

A free copy of the 1958 Supplement has already been sent automatically to Life Members and to Deans of Medical Schools in the United States and Canada.

The Supplement is available at \$2.50 per copy, postpaid, to all others.

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#### INTERNATIONAL MEETINGS, 1960

The following International Meetings, which were reported in the September issue of the *ANNALS OF INTERNAL MEDICINE* as scheduled for 1959, are to be held in 1960:

INTERNATIONAL CONGRESS OF CLINICAL PATHOLOGY, Madrid, Spain, June 13-17, 1960. Dr. J. Aparicio, Secretary-General, Sandoval 7, Madrid, Spain.

FOURTH INTERNATIONAL CONFERENCE ON GOITER, London, England, July 6-8, 1960. Dr. John C. McClintock, 149½ Washington Ave., Albany, N. Y.

INTERNATIONAL CONGRESS OF PHYSICAL MEDICINE, Washington, D. C., Aug. 21-26, 1960. Dr. W. J. Zeiter, 2020 E. 93rd St., Cleveland, Ohio.

INTERNATIONAL SOCIETY OF HEMATOLOGY, Tokyo, Japan, Aug. 25, 1960. Dr. Sol Haberman, 3500 Gaston Ave., Dallas, Tex.

WORLD CONGRESS OF THE INTERNATIONAL SOCIETY FOR THE WELFARE OF CRIPPLES, New York, N. Y., Aug. 29-Sept. 2, 1960. Mr. Donald V. Wilson, Secretary-General, 701 1st Ave., New York 17, N. Y.

CONGRESS OF INTERNATIONAL SOCIETY FOR CELL BIOLOGY, Paris, France, Sept. 7-9, 1960. Prof. Chevremont, 20, rue de Pitteurs, Liege, Belgium.

INTERNATIONAL CONGRESS OF NUTRITION, Washington, D. C., Sept. 1-7, 1960. Dr. Milton O. Lee, General Secretary, 9650 Wisconsin Ave., Washington 14, D. C.

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#### A.C.P. REGIONAL MEETINGS

The following regional meetings have been held during the past autumn: North Dakota, September 6; Michigan, September 19-20; Idaho-Utah, September 27; Midwest (Ill., Ind., Iowa, Minn., Wis.), September 27; Western New York, October 3;

Southeastern (Ala., Fla., Ga., Miss., S. C., Cuba), October 3-4; Montana-Wyoming, October 10-11; Arizona, October 18; Arkansas-Oklahoma, October 18; Kentucky-Tennessee, October 18; District of Columbia-Maryland, November 1; New England-Quebec-Atlantic Provinces, November 7-8; New Jersey, November 12; North Carolina, December 4, and Puerto Rico, December 20.

The following meetings are yet to be held:

<u>Territory</u>	<u>City</u>	<u>Date</u>	<u>Governor(s)</u>	<u>Official Guest(s)</u>
Colorado	Colorado Springs	Jan. 16-17, 1959	C. F. Kemper	Philip S. Hench, Regent
Ohio	Cincinnati	Jan. 22, 1959	A. C. Ernestene	Dwight L. Wilbur, President
Eastern Pennsylvania	Philadelphia	Jan. 23, 1959	W. A. Jeffers	Dwight L. Wilbur, President
Alberta, Manitoba and Saskatchewan, Canada	Banff, Alberta, Canada	Jan. 29, 1959	P. H. Sprague F. A. L. Mathewson	
Southern California	Palm Springs	Feb. 7-8, 1959	G. C. Griffith	Dwight L. Wilbur, President Howard P. Lewis, Pres.-Elect
Pacific Northwest (British Columbia, Oregon, Washington)	Vancouver, B. C., Canada	Feb. 14, 1959	H. A. Des Brisay M. L. Margason J. W. Haviland	Howard P. Lewis, Pres.-Elect
Missouri	Kansas City	Feb. 21, 1959	C. V. Moore	
Nebraska	Omaha	Mar. 7, 1959	E. M. Walsh	Dwight L. Wilbur, President
Kansas	Wichita	Mar. 20, 1959	F. J. McEwen	
Virginia	Hot Springs	Mar. 21, 1959	C. M. Caravati	Dwight L. Wilbur, President

#### A.C.P. POSTGRADUATE COURSE

At the time of the publication of the Final Postgraduate Bulletin last summer, the complete information was lacking regarding Courses Nos. 5, 6, and 8.

Course No. 5 is entitled INTERNAL MEDICINE—ESPECIALLY THERAPEUTICS, and is to be given at the University of Illinois College of Medicine, January 12-16, 1959, under the direction of Dr. Harry F. Dowling, F.A.C.P.

Course No. 6 is entitled CURRENT RESEARCH IN ENDOCRINOLOGY and will be presented at the National Institutes of Health, Bethesda, Md., February 2-4, 1959, under the co-direction of Drs. Delbert M. Bergenstal, F.A.C.P. and Joseph J. Bunim, F.A.C.P.

Course No. 8 is on RECENT ADVANCES IN INTERNAL MEDICINE and will be presented at the Pennsylvania Hospital, Philadelphia, Pa., February 23-27, 1959, under the direction of Dr. Garfield G. Duncan, F.A.C.P.

The courses are hereunder outlined. All registrations for A.C.P. courses must be filed directly with the Executive Secretary of the College, 4200 Pine St., Philadelphia 4, Pa.

Special folders outlining these courses have been published and will be furnished those interested upon request.

**COURSE No. 5**  
**INTERNAL MEDICINE—ESPECIALLY THERAPEUTICS**  
**(January 12-16, 1959)**

**University of Illinois College of Medicine**

**Chicago, Ill.**

**Meeting Place**

**Illini Union Bldg.**

**715 S. Wood St.**

*Director*

**HARRY F. DOWLING, M.D., F.A.C.P.**

*Associate Directors*

**JAMES A. CAMPBELL, M.D., (Associate)**

**FORD K. HICK, M.D., F.A.C.P.**

**(Minimal Registration, 50;**

**Maximal Registration, 70)**

**Fees: A.C.P. Members, \$30.00**

**Non-members, \$60.00**

The course will consist of lectures and panel discussions, chiefly on therapy. It is hoped that the physicians attending the course will participate freely in discussions and in question and answer opportunities. Instructors are asked to include time for such discussions. The men presenting material will speak chiefly on therapy with a view to assist the physician in clarification of his own problems. There will be sessions dealing with the use of antibiotics, steroids, antihypertensive drugs and diuretics, and on the subjects of nephritis, psychotherapy, congestive heart failure, epilepsy, hepatic failure, diabetes, arthritis and leukemia.

*Hotel Accommodations:* Sherman Hotel, Chicago, Ill.; Mrs. Catherine Lowery, Reservation Manager. Single rooms, \$7.45 to \$15.95 per day; twin bedded rooms, \$14.45 to \$21.95 per day. Reservations should be made at once as they are limited due to conventions in Chicago. It is especially requested that when making reservations, you identify yourself with the College and this particular course.

**COURSE No. 6**  
**CURRENT RESEARCH IN ENDOCRINOLOGY**  
**(February 2-4, 1959)**

**National Institutes of Health**

**Bethesda, Md.**

**Meeting Place**

**Clinical Center Auditorium**

*Co-Directors*

DELBERT M. BERGENSTAL, M.D., F.A.C.P.

JOSEPH J. BUNIM, M.D., F.A.C.P.

LUTHER L. TERRY, M.D., F.A.C.P.

(Minimal Registration, 50;

Maximal Registration, 100)

Fees: A.C.P. Members, \$30.00

Non-members, \$60.00

This three-day course is designed to give the internist an intensive review of present research trends and developments in the field of Endocrinology. The staff of several of the Institutes of the National Institutes of Health will participate in presenting this course. The research program of these institutes, as related to the field of Endocrinology, will serve as the basis of these presentations and no attempt will be made to give a didactic review of established information in the field. Rather, the established facts will be taken as the starting point and the faculty will discuss current research trends and developments. An attempt will be made to concentrate on those facets which have direct clinical interests and applications. Laboratory studies will be discussed as they contribute to the fundamental understanding of the subject or as they may apply to the field of clinical medicine. The material to be presented will be in the form of lectures, demonstrations and panel discussions. Adequate time will be allowed for questions and discussions on each subject.

*Hotel Accommodations:* The Bethesdan Motor Hotel, 7740 Wisconsin Ave., Bethesda 14, Md.; Mr. U. O. Wamsley, General Manager. Single rooms, \$8.00 per day; twin bedded rooms, \$12.00 per day. When writing for reservations identify yourself with the College and this particular course. **Reservations should be made by December 15, 1958.**

This motel is approximately one-half mile from the National Institutes of Health and public bus transportation is available from the motel.

**COURSE No. 8****RECENT ADVANCES IN INTERNAL MEDICINE**

(February 23-27, 1959)

Pennsylvania Hospital

Philadelphia, Pa.

Meeting Place

Pennsylvania Hospital Auditorium

8th &amp; Spruce Sts.

*Director*

GARFIELD G. DUNCAN, M.D., F.A.C.P.

*Co-director*

ROBERT J. GILL, M.D., (Associate)

(Minimal Registration, 75;

Maximal Registration, 100)

Fees: A.C.P. Members, \$30.00

Non-members, \$60.00

The main objectives in this course will be the clinical application of recent advances in the understanding of clinical pathologic physiology, improved methods of evaluating clinical conditions and advances in therapy that have resulted from recent progress in the understanding of these processes.

Special emphasis will be given to alterations in lipid metabolism in atherosclerosis and the methods of reversing these processes, the classification and management of essential hypertension, developments in the management of cardiovascular disease, chronic diseases of the liver, simplified management of diabetes and new agents employed in the treatment of this disease, spontaneous hypoglycemia, problems presented by antibiotic therapy and methods for their correction, virus infections, new approaches to the understanding of neurologic disorders, and chemotherapy in neoplastic disease. Other features will include medical emergencies, clinics and panel discussions.

Courses similar to this were organized and directed by Dr. Duncan for the College in 1951 and again in 1956. Each of these courses had the largest registration of any courses for those semesters.

*Hotel Accommodations:* The Benjamin Franklin Hotel, 9th & Chestnut Sts., Philadelphia 5, Pa.; Mr. Robert C. Bennett, Sales Manager. Single rooms, \$7.00, \$8.00, \$9.00 and \$10.00 per day; twin bedded rooms \$13.00, \$14.00 and \$15.00 per day. When writing for reservations, identify yourself with the College and this particular course.

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POSTGRADUATE COURSE ON PULMONARY FUNCTION

The 9th Annual Postgraduate Course on Pulmonary Function will be held at Boston City Hospital, Boston, Mass., March 23-27, 1959. Dr. Edward J. Welch, F.A.C.P., Assistant Clinical Professor of Medicine, Boston University School of Medicine, is serving as Chairman. The course is sponsored by the American Trudeau Society in cooperation with the Massachusetts Trudeau Society, the Harvard Medical School, the Boston University School of Medicine, and Tufts University Medical School. Under the general subject of "The Measurement of Pulmonary Function in Health and Disease"; there will be the following five major topics: "The Mechanical and Physiologic Aspects of Respiration: Methods of Analysis of Pulmonary Function"; "Cardio-Pulmonary Relationships"; "Alterations of Pulmonary Function by Disease and Therapy"; "Pulmonary Function and Anesthesia," and "Clinical Application of Tests of Pulmonary Function." The course fee will be \$75.00. There are several scholarships covering expenses in whole or in part available. Candidates for scholarships or attendance at the course should write to Edward J. Welch, M.D., 1101 Beacon St., Brookline 46, Mass., for application forms.



#### FELLOWSHIP IN MEDICAL NEOPLASIA

The Memorial Center for Cancer and Allied Diseases, specializing in training in the field of cancer and allied diseases, and affiliated with Cornell University Medical College, New York, N. Y., offers special fellowships in medical neoplasia. Candidates must be graduates of recognized American Medical Association approved medical schools and must have completed or be in the process of completing two years of postgraduate training in internal medicine, in addition to one year of internship. The annual stipend is \$6,000 without maintenance. Fellowships are for one year beginning July 1, and may be renewable for one or two years. For information, write Lloyd F. Craver, M.D., Chief, Medical Neoplasia Service, Memorial Center for Cancer and Allied Diseases, 444 E. 68th St., New York 21, N. Y.

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#### NEW PROGRAM FOR INTERNSHIP AND RESIDENCIES

The University of Washington School of Medicine will offer a new internship and residency program beginning July 1, 1959. The program will be centered in the new University Hospital which will be open next May and will ultimately provide a 300-bed capacity. It will be staffed by University faculty and located on the University campus near the Health Sciences Building. It will include a large outpatient clinic, a rehabilitation center, an inpatient psychiatric department, in addition to the regular teaching features of the hospital. Twelve internships will be available, nine will be mixed, and three will be rotating. Four of the mixed internships will have a major in medicine and one in pediatrics. Stipends will be \$150 per month, plus \$30 food allowance. Write to Medical Director, University Hospital, Seattle 5, Wash.

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#### AMERICAN GOITER ASSOCIATION ESSAY AWARDS

The American Goiter Association again offers the Van Meter Prize Award of \$300 and two honorable mentions for the best essays submitted concerning original work on problems related to the thyroid gland. The awards will be made at the annual meeting of the Association which will be held in Chicago, Ill., April 30-May 2, 1959. The competing essays may cover either clinical or research investigations, should not exceed 3,000 words in length, and must be presented in English. Write to the Secretary, Dr. John C. McClintock, 149½ Washington Ave., Albany 10, N. Y.

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#### AWARD FOR STUDY IN PSYCHIATRY

The annual award made by the Society of Biological Psychiatry in coöperation with the A. E. Bennett Neuropsychiatric Research Foundation, is available to young investigators who may not be members of the Society, in recognition of work which has been recently accomplished and unpublished. The award will include an honorarium of \$250 and travel expenses to the annual meeting of the Society. For information, write Arthur A. Ward, School of Medicine, University of Washington, Seattle 5, Wash., or Dr. Harold E. Himwich, Chairman, Committee of Award, Galesburg State Research Hospital, Galesburg, Ill.

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#### A.C.P. MEMBERS ACTIVE IN AMERICAN HEART ASSOCIATION

The American Heart Association held its annual meeting in San Francisco, Calif., October 24-27, 1958. Many members of the College were participants, but several Fellows held major assignments during the meeting. Dr. A. Carlton Ernstene, Cleveland, Ohio, was Chairman of an all-day session for clinicians and Dr. Herrman L.

Blumgart, Boston, Mass., was Moderator of a panel on "What's New in Arrhythmias." Dr. David Adlersberg, New York, N. Y., was Chairman of a symposium on "Genetic Factors in Cardiovascular Disease," which was co-sponsored with the American Society for the Study of Arteriosclerosis. Dr. George E. Burch, Jr., New Orleans, La., was Co-Chairman of a meeting sponsored by the Council on Circulation and the Microcirculatory Conference. Dr. Charles E. Kossman, New York, N. Y., was Co-Chairman of a session on "Instrumental Study of the Heart and Circulation." Dr. Robert W. Wilkins, Boston, Mass., and Dr. Edgar V. Allen, Rochester, Minn., both past Presidents of the American Heart Association, were Co-Chairmen of the scientific section on "Applied Cardiovascular Research" and Dr. Louis Katz, Chicago, Ill., and Arthur C. Corcoran, Cleveland, Ohio, moderated panels on "Emotional Factors in Atherosclerosis," and the "Association of Hypertension and Atherosclerosis." Drs. William Goldring, New York, N. Y., Currier McEwen, New York, N. Y., and Walter S. Priest, Chicago, Ill., served as Chairmen of various sessions on science and medicine.

Among those who were Chairmen of the Assembly Panels were: Drs. George C. Griffith, Los Angeles, Calif.; Oglesby Paul, Chicago, Ill.; Stewart G. Wolf, Jr., Oklahoma City, Okla., and Jerome G. Kaufman, Newark, N. J.

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#### SYMPOSIUM ON NUTRITION HONORS DR. JOHN BARLOW YOUNG

The Vanderbilt University School of Medicine held a symposium on Nutrition in Internal Medicine and on Medical Education in honor of Dr. John Barlow Young, F.A.C.P., Nashville, Tenn., on December 4-5, 1958. Among those who participated in the program were the following Fellows: Drs. W. H. Sebrell, Jr., Manhasset, N. Y.; Grace A. Goldsmith, New Orleans, La.; Robert M. Kark, Chicago, Ill.; John Z. Bowers, Madison, Wis.; L. T. Coggeshall, Chicago, Ill.; C. Sidney Burwell, Boston, Mass., and Ward Darley, Boulder, Colo.

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#### MEDICAL RESEARCH PROGRAM

The National Fund for Medical Education which was formed in 1949 and is financed by contributions from United Funds, Community Chests, voluntary health agencies and other organizations, has established a medical research program. The objectives of the new program will be to support basic research, encourage the training of research personnel, and aid medical schools and other qualified institutions to maintain a desirable balance between basic and applied research. The fund has awarded a total of \$15,843,766 to medical schools since the inauguration of the organization.

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#### OFFICERS OF THE AMERICAN SOCIETY OF INTERNAL MEDICINE

The following is a list of the State Societies and of the current Presidents and Secretaries of the American Society of Internal Medicine:

- ALABAMA: William H. Tucker, M.D., Pres., Mobile; W. Marvin Woodall, M.D., Sec.-Treas., 2219 Highland Ave., Birmingham.  
ARIZONA: C. Selby Mills, M.D., Pres., Phoenix; Stuart W. Westfall, M.D., Sec.-Treas., 1608 N. Morton Ave., Tucson.  
CALIFORNIA: Robert L. Smith, Jr., M.D., Pres., San Francisco 1; Clyde C. Greene, Jr., M.D., Sec.-Treas., 490 Post St., San Francisco 2.  
CONNECTICUT: John C. White, M.D., Pres., New Britain; Frederick A. Beardsley, M.D., Sec.-Treas., 132 Mansfield Ave., Willimantic.

- DISTRICT OF COLUMBIA: Clayton B. Etheridge, M.D., Pres., Washington, D.C.; Frank S. Bacon, M.D., Sec., 1150 Connecticut Ave., N.W., Washington, D. C.
- FLORIDA: W. Dean Steward, M.D., Pres., Orlando; Charles K. Donegan, M.D., Sec.-Treas., 501 11th St., N., St. Petersburg.
- GEORGIA: J. H. Hilsman, M.D., Pres., Atlanta; David E. Hein, M.D., Sec.-Treas., 340 Boulevard, N.E., Atlanta 12.
- IDAHO: William Forney, M.D., Pres., Boise; George R. Baker, M.D., Sec.-Treas., 303 N. 5th St., Boise.
- ILLINOIS: Norris L. Brookens, M.D., Pres., Urbana; G. K. Greening, M.D., Sec.-Treas., 945 S. 2nd St., Springfield.
- INDIANA: Stephen Johnson, M.D., Pres., Evansville; E. Paul Tischer, M.D., Sec.-Treas., 208 Hume-Mansur Bldg., Indianapolis.
- KENTUCKY: Franklin B. Moosnick, M.D., Pres., Lexington; Carl H. Fortune, M.D., Sec.-Treas., 190 N. Upper St., Lexington.
- LOUISIANA: Carl S. Nadler, M.D., Pres., New Orleans; Morris Shushan, M.D., Sec.-Treas., 150 Baronne St., New Orleans.
- MAINE: Philip P. Thompson, Jr., M.D., Pres., South Portland; William C. Burrage, M.D., Sec.-Treas., 57 Deering St., Portland.
- MARYLAND: Edward F. Cotter, M.D., Pres., Baltimore; Katherine H. Borkovich, M.D., Sec.-Treas., 11 E. Chase St., Baltimore 2.
- MASSACHUSETTS: Howard F. Root, M.D., Pres., Boston; Frank C. Christopher, M.D., Sec., 105 Governor Ave., Medford.
- MICHIGAN: Noyes L. Avery, Jr., M.D., Pres., Grand Rapids; Ross V. Taylor, M.D., Sec.-Treas., 517 Wildwood Ave., Jackson.
- MINNESOTA: B. F. Fuller, M.D., Pres., St. Paul; John G. Fee, M.D., Sec.-Treas., 1210 Lowry Medical Arts Bldg., St. Paul 2.
- MISSISSIPPI: Gayden Ward, M.D., Pres., Jackson; John Archer, M.D., Sec.-Treas., Medical Arts Bldg., Greenville.
- MISSOURI: Daniel M. Sexton, M.D., Pres., St. Louis; Robert E. Koch, M.D., Sec.-Treas., 35 N. Central Ave., Clayton.
- MONTANA: John S. Gilson, M.D., Pres., Great Falls; A. K. Atkinson, M.D., Sec., Great Falls Clinic, Great Falls.
- NEBRASKA: Henry J. Lehnhoff, Jr., M.D., Pres., Omaha; Edward Langdon, M.D., Sec.-Treas., 822 The Doctors Bldg., Omaha 31.
- NEW JERSEY: Sherwood Vine, M.D., Pres., Trenton; Martin Epstein, M.D., Sec.-Treas., 834 W. State St., Trenton.
- NEW MEXICO: Eric P. Hausner, M.D., Pres., Santa Fe; Heinz R. Landmann, M.D., Sec.-Treas., 227 E. Palace Ave., Santa Fe.
- NEW YORK: Virgil H. F. Boeck, M.D., Pres., Buffalo; Robert Westlake, M.D., Sec., 713 E. Genesee St., Syracuse 2.
- NORTH CAROLINA: Charles W. Styron, M.D., Pres., Raleigh; Henry Valk, M.D., Sec., Bowman Gray School of Medicine, Winston-Salem.
- NORTH DAKOTA: James F. Houghton, M.D., Pres., Fargo; A. C. Fortney, M.D., Sec.-Treas., 807 Broadway, Fargo.
- OHIO: Arnoldus Goudsmit, M.D., Pres., Youngstown; Leonard P. Caccamo, M.D., Sec.-Treas., 419 Chaplain Ave., Youngstown 4.
- OKLAHOMA: S. C. Shepard, M.D., Pres., Tulsa; N. C. Gaddis, M.D., Sec.-Treas., 1530 S. Peoria, Tulsa.
- OREGON: Franz Stenzel, M.D., Pres., Portland; Arthur W. Berg, M.D., Sec.-Treas., 914 Medical Dental Bldg., Portland 5.
- PENNSYLVANIA: George L. Jackson, M.D., Pres., Harrisburg; Carl R. Sherk, M.D., Sec., 427 Cumberland St., Lebanon.
- PUERTO RICO: Jose M. Tores, M.D., Pres., San Juan; Ernesto C. Martinez, Sec.-Treas., Charity District Hospital, Bayamon.

- SOUTH CAROLINA: Ben N. Miller, M.D., Pres., Columbia; Richard M. Christian, M.D., Sec., 106 Maxwell Ave., Greenwood.
- SOUTH DAKOTA: W. L. Jones, M.D., Pres., Sioux Falls; R. F. Thompson, M.D., Sec.-Treas., Yankton.
- TENNESSEE: Laurence A. Grossman, M.D., Pres., Nashville; Carl C. Gardner, Jr., M.D., Sec.-Treas., P. O. Box 168, Columbia.
- TERRITORY OF HAWAII: L. Clagett Beck, M.D., Pres., Honolulu; S. Richard Horio, M.D., Sec.-Treas., 510 S. Beretania St., Honolulu.
- UTAH: John H. Rupper, M.D., Pres., Provo; Richard J. Nelson, M.D., Sec.-Treas., 1310 S. 17th East, Salt Lake City.
- VIRGINIA: M. Morris Pinckney, M.D., Pres., Richmond; Thomas N. Hunnicutt, M.D., Sec.-Treas., 2901 West Ave., Newport News.
- WASHINGTON: John W. Skinner, M.D., Pres., Yakima; Warren B. Spickard, M.D., Sec.-Treas., 1338 Medical Dental Bldg., Seattle.
- WEST VIRGINIA: Joseph M. Farrel, M.D., Pres., Huntington 1; Rowland Burns, M.D., Sec.-Treas., 1109 6th Ave., Huntington.
- WISCONSIN: Robin N. Allin, M.D., Pres., Madison; Mr. John C. Kadonsky, Exec. Sec., 756 N. Milwaukee St., Milwaukee 2; Paul G. LaBissoniere, M.D., Sec.-Treas., 324 E. Wisconsin Ave., Milwaukee 2.
- WYOMING: Ben M. Leeper, M.D., Pres., Cheyenne; Roy W. Holmes, M.D., Sec.-Treas., 1204 E. 2nd St., Casper.

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#### Personal Notes

Dr. Irvine H. Page, F.A.C.P., Cleveland, Ohio, Director of Research of the Cleveland Clinic Foundation, received the 1958 Albert Lasker Award of the American Heart Association recently. The award was made "for his many contributions to the knowledge of the basic mechanisms of hypertension, one of the most difficult and elusive problems in all medicine."

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Brigadier General M. S. White, F.A.C.P., U. S. Air Force (MC), Washington, D. C., President of the Aero Medical Association and Director of Medical Staffing and Education, Office of the Air Force Surgeon General, represented the Association and the Air Force Surgeon General at the World Congress of Aviation Medicine, Third European Congress, in Louvain, Belgium, September 23-27, 1958. General White presented one of the introductory addresses at the Inaugural Session on September 23. His subject was "Aeromedical Realities of Space Travel."

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Colonel Charles K. Morris, (Associate), U. S. Air Force (MC), became Commander of the 7424th U. S. Air Force Hospital, Bitburg, Germany, in December, 1958. He will replace the present Commander, Colonel George H. Kojac, U. S. Air Force (MC). Colonel Morris has been Commander of the U. S. Air Force Hospital at Mitchel Air Force Base, New York, since 1953.

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Dr. Julian Love, F.A.C.P., Arcadia, Calif., is now on the staff of the Arcadia Clinic. Dr. Love is a retired Captain of the Medical Corps, U. S. Navy and former Commanding Officer of the U. S. Naval Hospital, Corona, Calif.

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Dr. Ward Darley, F.A.C.P., Evanston, Ill., delivered an address at the Annual Meeting of the Association of Teachers of Preventive Medicine held in St. Louis, Mo., October 26, 1958. His subject was "Preventive Medicine in Medical Education."

Dr. Edward L. Bortz, F.A.C.P., Philadelphia, Pa., represented the American College of Physicians at the meeting of the American Medical Association Planning Conference on Medical Society Action in the Field of Aging held in Chicago, Ill., September 13-14, 1958.

Dr. Edward S. McCabe, F.A.C.P., Philadelphia, Pa., is Medical Editor for a series of eight medical books to be published by Keystone Books in Medicine of the J. B. Lippincott Co. of Philadelphia, Pa. The books are intended primarily for the laity upon recommendation by a physician. The first two, released in August, included: "Living with your Allergy," by Dr. Samuel M. Feinberg, F.A.C.P., Chicago, Ill., and "Epilepsy—What It Is; What to Do About It," by Dr. Tracy J. Putnam. Future books include: "Help for Ten Million (Arthritis)," by Dr. Darrell C. Crain, Jr., F.A.C.P., Washington, D. C., and "Partial Deafness," by Dr. Greydon Boyd.

Dr. Robert H. Furman, F.A.C.P., Oklahoma City, Okla., Head of the Cardiovascular Section of the Oklahoma Medical Research Foundation, attended the 3rd World Congress of Cardiology at Brussels, Belgium. He presented a paper, "The Effects of Dietary Protein Deprivation on Serum Lipids and Lipoproteins and their Response to Gonadal Steroids."

The Surgeon General of the Navy, Rear Admiral Bartholomew W. Hogan, F.A.C.P., (MC), U. S. Navy, Washington, D. C., conducted a three-day conference with senior medical officers of the Navy on September 17-19, 1958, at the National Naval Medical Center, Bethesda, Md. The Chairman was Rear Admiral Edward C. Kenney, F.A.C.P., (MC), U. S. Navy, Washington, D. C., Assistant Chief of the Bureau of Medicine and Surgery for Personnel and Professional Operations.

Dr. Francis J. Braceland, F.A.C.P., Hartford, Conn., was one of five inactive Naval Reserve Medical Corps Captains selected for promotion to Rear Admiral. President Dwight D. Eisenhower approved the selection for the promotions.

Dr. Robert I. Wise, (Associate), Philadelphia, Pa., discussed "Modern Methods of Diagnosis," at the 2nd Annual Symposium on Infectious Diseases, sponsored by the American Academy of General Practice, the Kansas University Medical Center, and Lederle Laboratories on September 19, 1958, at Kansas City, Kans. Dr. Robert W. Weber, (Associate), Prairie Village, Kans., moderated a panel discussion at the Symposium.

Among the speakers at the 12th Annual Meeting of the Southwest Louisiana Graduate Medical Assembly held on September 12-13, 1958, at Lake Charles, La., were Drs. William A. Sodeman, F.A.C.P., Philadelphia, Pa., John R. Snively, (Associate), Jackson, Miss., and David Buttross, Jr., (Associate), Lake Charles, La.

Dr. George W. Slagle, F.A.C.P., Battle Creek, Mich., delivered the President's Annual Address at the 93rd Annual Session of the Michigan State Medical Society held September 30-October 3, 1958, at Detroit, Mich. Dr. David J. Sandweiss, F.A.C.P., Detroit, Mich., was Moderator of a panel on "Malabsorption Syndrome and Diarrhea," and Dr. Henry L. Bockus, F.A.C.P., Philadelphia, Pa., delivered the Andrew P. Biddle Lecture, entitled "Functional Disorders of the Digestive Tract."



Captain Elmer L. Caveny, F.A.C.P., (MC), U. S. Navy (Retired), Professor of Psychiatry, Medical College of Alabama, Birmingham, Ala., presented the graduation address of the Flight Surgeon Class No. 88, at the Naval School of Aviation Medicine, Pensacola, Fla., September 19, 1958.

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Two Minneapolis members of the College were active in the clinical meeting of the American Medical Association held in Minneapolis, Minn., December 2-5, 1958. Dr. Horatio B. Sweetser, Jr., F.A.C.P., President of the Minnesota State Medical Association, welcomed the Assembly and Dr. O. L. Norman Nelson, Associate, President of the Hennepin County Medical Society, served as local General Chairman.

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Dr. S. J. Weinberg, F.A.C.P., Associate Clinical Professor of Medicine, University of California School of Medicine at Los Angeles, addressed the medical faculty of the Royal University of Upsala, Sweden, September 20, 1958, on the subject, "Central Nervous System Regulation of Heart and Kidneys."

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Dr. Francis M. Pottenger, M.A.C.P., Pasadena, Calif., was awarded a gold medal at the Annual Meeting of the Phi Rho Sigma Fraternity held in Wisconsin Dells, Wis., June 24, 1958. The citation was in recognition of Dr. Pottenger's contribution to the field of medicine. At the meeting he discussed the subject, "What a Wonderful Century in Which to Live."

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Dr. Joseph J. Bunim, F.A.C.P., Bethesda, Md., was the guest speaker at the Second Brazilian Congress on Rheumatology at Pocos de Caldas, Brazil, April 18-26, 1958, and also addressed the student body and faculty at the College of Medicine, University of Brazil, Rio de Janeiro and at Sao Paulo University Medical School at Sao Paulo, Brazil.

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Dr. Harold A. Hanno, F.A.C.P., Philadelphia, Pa., presented a paper entitled "Vitreous Hemorrhage as a Manifestation of Sick Cell-Hemoglobin C Diseases" on September 11, 1958 at the Seventh Congress of the International Society of Hematology in Rome, Italy.

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Dr. Edgar S. Gordon, F.A.C.P., Madison, Wis., was on the faculty of the Conference on Athletic Injuries held in Milwaukee, Wis., November 7, 1958.

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Among the speakers at the 15th Annual Meeting of the American Medical Writer's Association held in Chicago, Ill., September 26-27, 1958, were the following Fellows of the College: Drs. John Z. Bowers, Madison, Wis., Editor of *Journal of Medical Education*; Charles E. Lyght, Rahway, N. J., Director, Medical Publications, Merck, Sharp & Dohme Research Laboratories, and Karl A. Menninger, Topeka, Kans., Chief of Staff of the Menninger Foundation.

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Participating in the National Consultants and Command Surgeons Conference at Andrews Air Force Base Hospital, Washington, D. C., September 3-5, 1958, were: Drs. William N. Hubbard, Jr., (Associate), Associate Dean of New York University

College of Medicine, New York, N. Y.; Clarence C. Pearson, F.A.C.P., of the Mason Clinic, Seattle, Wash.; General Otis O. Benson, Jr., F.A.C.P., Washington, D. C., Commandant of the U. S. Air Force School of Aviation Medicine; Colonel Benjamin A. Strickland, Jr., F.A.C.P., Washington, D. C., Surgeon of Air Defense Command, and Brigadier General M. S. White, F.A.C.P., Director of Medical Staffing and Education, U. S. Air Force, Washington, D. C. Major General Dan C. Ogle, F.A.C.P., Surgeon General, U. S. Air Force, convened the meeting.

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Dr. John A. Layne, F.A.C.P., Great Falls, Mont., President of the Montana State Medical Association, presented an address at the Association's 80th Annual Meeting held in Billings, Mont., September 11-13, 1958. Dr. Frederick W. Hoffbauer, F.A.C.P., Minneapolis, Minn., was a guest speaker on the program.

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Dr. Karl H. Beyer, Jr., F.A.C.P., West Point, Pa., has been elected an Administrative Vice President of the Merck Sharp & Dohme Research Laboratories by the Board of Directors of the Company.

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Dr. Charles H. Burnett, F.A.C.P., Head of the Department of Medicine, University of North Carolina School of Medicine, Chapel Hill, N. C., has been appointed to serve on the National Advisory Arthritis and Metabolic Diseases Council until September 30, 1962. His department recently received a grant of \$250,000 from the Rockefeller Foundation for a five-year development program.

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Dr. Rudolph E. Fremont, F.A.C.P., Brooklyn, N. Y., presented a paper entitled "Newer Diagnostic and Therapeutic Aspects of Acute Idiopathic Pericarditis," at the Annual Meeting of the American College of Chest Physicians, and one entitled "Controlled Studies of the Effect of Bilateral Internal Mammary Artery Ligation in Patients with Angina Pectoris," at the 4th Annual Meeting of the American College of Angiology, in San Francisco, June 19 and 22 respectively.

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Two Fellows of the College participated in the Tri-State Medical Society Meeting in Shreveport, La., September 10-11, 1958. Dr. Don W. Chapman, Houston, Tex., presented the topic, "Cardiology," and Dr. Bertram E. Sprofskin, Nashville, Tenn., "Benign Disorders of Peripheral Nerves." Dr. Richard B. Langford, F.A.C.P., Shreveport, La., was installed as President of the Society.

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Dr. M. Paul Starr, F.A.C.P., Pasadena, Calif., was elected Second Vice President of the American Goiter Association at a recent meeting.

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Three Fellows of the College were among officers elected at the Annual Meeting of the American Rheumatism Association. They were: Dr. Joseph J. Bunim, Bethesda, Md., President; Dr. Charley J. Smyth, Denver, Colo., First Vice President and President-Elect, and Dr. Donald F. Hill, Tucson, Ariz., Secretary-Treasurer.

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Dr. William R. Arrowsmith, (Associate), New Orleans, La., and Dr. John R. Snavelly, (Associate), Jackson, Miss., were speakers at the Tennessee Valley Assembly, sponsored by the Chattanooga and Hamilton County Medical Society and held on September 29-30, 1958.

Dr. Karl A. Menninger, F.A.C.P., Topeka, Kans., was a participant in an Institute on Chronic Schizophrenia and Hospital Treatment Program at the Osawatomie State Hospital, Osawatomie, Kans., October 1-3, 1958. The program was supported by a grant from the National Institute of Mental Health, Bethesda, Md., and Smith, Kline & French Laboratories, Philadelphia, Pa.

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Dr. Hyman B. Stillerman, (Associate), Atlanta, Ga., represented the American College of Physicians at the Conference on Control of Staphylococcal Infections sponsored by the National Research Council and Public Health Service held in Atlanta, Ga., September 15-16, 1958. Dr. Leroy E. Burney, F.A.C.P., Washington, D.C., Surgeon General, U. S. Public Health Service, served as Chairman of the Conference.

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Dr. Franklin G. Ebaugh, F.A.C.P., Denver, Colo., was a speaker at the 9th Annual Assembly of the Texas Academy of General Practice held in San Antonio, Tex., September 21-24, 1958.

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At the 69th Annual Convention of the Washington State Medical Association held in Spokane, Wash., September 14-17, 1958, Dr. William S. Middleton, M.A.C.P., Washington, D. C., presented a paper entitled "Aneurysm of the Aorta," and Dr. Lucian A. Smith, F.A.C.P., Rochester, Minn., discussed "Remote Pain as an Aid in the Diagnosis of Abdominal Disease."

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Two Fellows of the College were Guest Moderators of panel discussions at the Symposium on Gastroenterology sponsored by the Cabell County Medical Society in Huntington, W. Va., September 11, 1958. Dr. Seymour J. Gray, Boston, Mass., moderated the panel on "Gastrointestinal Bleeding," and Dr. William B. Bean, Iowa City, Iowa, one on "Jaundice."

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Dr. S. Richard Horio, (Associate), Honolulu, Hawaii, was elected Secretary-Treasurer of the Hawaii Society of Internal Medicine recently.

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The following members of the American College of Physicians were elected officers of the American College of Gastroenterology at the Annual Meeting held in October, 1958: Dr. Joseph Shaiken, F.A.C.P., Milwaukee, Wis., President-Elect; Dr. Henry Baker, F.A.C.P., Boston, Mass., 1st Vice President; Dr. Louis Ochs, Jr., F.A.C.P., New Orleans, La., 2nd Vice President; Dr. Theodore S. Heineken, F.A.C.P., Glen Ridge, N. J., 4th Vice President, and Dr. Joseph R. Van Dyne, (Associate), Forest Hills, N. Y., Secretary.

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At the Annual Meeting of the Michigan Society of Internal Medicine held in Traverse City on September 20, the following Fellows of the College were elected: Drs. Ross V. V. Taylor, Jackson, President; Bert M. Bullington, Saginaw, President-Elect, and Richard C. Bates, Lansing, Secretary-Treasurer. Other members of the Executive Council are: Drs. H. M. Pollard, Ann Arbor, A.C.P. Governor for Michigan; Noyes L. Avery, Jr., Grand Rapids; James W. Hall, Jr., Traverse City; John D. Littig, Kalamazoo, and Ralph R. Cooper, Detroit.

Dr. Edmund Jacobson, F.A.C.P., Director of Laboratory for Clinical Physiology, Chicago, Ill., reported that the U. S. Navy has sent two medical officers to the clinic for an abridged course on Tension States in Military Medicine. One of the officers is to be trained as an instructor in tension control methods for Navy jet fliers, the other will be instructed in these methods as they are applied during prolonged voyages in submarines. Courses in Tension States in Office and Hospital Practice will be offered in 1960 by the Foundation for Scientific Relaxation.

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Dr. James E. Cassidy, (Associate), has been named Assistant Director and Chief of the Medical Unit of the Student Health Service at the University of Chicago. He will also be Assistant Professor of Medicine at the University of Chicago, The School of Medicine. Dr. Cassidy was formerly a Captain in the U. S. Air Force (MC) and is a graduate of the Stritch School of Medicine of Loyola University.

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Dr. Theodore Rothman, F.A.C.P., Associate Clinical Professor of Psychiatry, University of Southern California School of Medicine, Los Angeles, Calif., presented two papers at international meetings during September and spoke at a national meeting during October. His international presentations included: "Studies in Pharmacologic Psychotherapy IV: Nine Years' Experience with the Treatment of Refractory Psychoneuroses and Personality Disorders with Sodium Pentothal, Methamphetamine and Methylphenidate (Ritalin)," at the 1st International Meeting of Neuro-Psychopharmacology in Rome, Italy, September 12, 1958, and "Montaigne's Concept of Human Nature, Renaissance Medicine and Modern Psychiatry," at the 16th Congress International d'Histoire de la Medecine in Montpellier, France, September 22, 1958. The national presentation was that of "Goals in Treatment; Training Potentialities" and "Disturbed Communication and Psychotherapy," at the 5th Annual Meeting of the Academy of Psychosomatic Medicine, New York, N. Y., October 10, 1958.

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Dr. Carroll M. Leevy, F.A.C.P., Associate Professor of Clinical Medicine, Seton Hall College of Medicine and Dentistry, Jersey City, N. J., has been appointed U. S. Naval representative for the medical school. He is currently spending a year in research on nutrition and liver disease with Dr. Charles S. Davidson, F.A.C.P., at the Thorndike Memorial Laboratory, Boston, Mass. Dr. Leevy is a Consultant in Medicine at the U. S. Naval Hospital, St. Albans, N. Y., and holds the rank of Commander in the Medical Corps, U. S. Naval Reserve.

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Dr. Ben N. Miller, Jr., F.A.C.P., Columbia, S. C., was recently elected a member of the Board of Trustees of Duke University.

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The newly-organized Virginia Society of Internal Medicine elected three Fellows of the College as officers. They are: Dr. M. M. Pinckney, Richmond, Va., President; Dr. J. Franklin Waddill, Norfolk, Va., Vice President, and Dr. Thomas N. Hunnicutt, Jr., Newport News, Va., Secretary-Treasurer.

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Dr. J. A. Shield, F.A.C.P., Richmond, Va., was elected Executive Vice President of the Virginia Museum of Fine Arts recently.

Dr. James P. Murphy, F.A.C.P., St. Louis, Mo., was named President of the Medical Alumni Association of St. Louis at a recent meeting.

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Dr. Bernard S. Lipman, F.A.C.P., Associate in the Department of Medicine, Emory University School of Medicine, Atlanta, Ga., was a guest lecturer at the Postgraduate Course in Advanced Clinical Electrocardiography presented by the University of Tennessee College of Medicine, October 8-10, 1958, in Memphis, Tenn.

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Dr. Michael A. Rubinstein, F.A.C.P., Beverly Hills, Calif., has been recently appointed Associate Professor of Medicine at the College of Medical Evangelists, and Hematologist on the Attending Staff of the Cedars of Lebanon Hospital, Los Angeles, Calif. Dr. Rubinstein participated in the following programs during recent months: presented a scientific exhibit on "Recovery of Osteoblasts and Osteoclasts in Bone Marrow Aspiration," at the Annual Meeting of the American Medical Association in San Francisco, Calif., in June; presented two papers before the International Congress of Blood Transfusion Association held in Rome, Italy. The first was presented on September 4, on the subject, "Unusual Dramatic Remission in Thrombotic Thrombocytopenic Purpura Following Fresh Blood Exchange Transfusions," and the second on September 11, on "Diagnostic Importance of Bone Marrow Aspiration in Metabolic Bone Diseases—Osteoblasts and Osteoclasts in Bone Marrow Aspiration."

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Among the officers elected at a recent meeting of the American Therapeutic Society were four Fellows of the College. They are: Dr. Tom D. Spies, Birmingham, Ala., President; Dr. George E. Burch, Jr., New Orleans, La., Dr. George C. Griffith, Los Angeles, Calif., and Frank B. Kelly, Sr., Chicago, Ill., Vice Presidents.

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Dr. George F. Evans, F.A.C.P., Clarksburg, W. Va., was elected President of the West Virginia State Medical Association at a recent meeting of the Association.

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Five Fellows and an Associate of the College were speakers at the 111th Meeting of the Medical Society of Virginia at Richmond, Va., October 12-14, 1958. The Fellows and the titles of their papers were: Drs. Reno R. Porter, Richmond, Va., "Anti-Coagulants"; Edward S. Orgain, Durham, N. C., "The Present Status of Drugs in Hypertension"; William H. Harris, Jr., "The Sulfonamides—Twenty-Five Years Later," and Ewald W. Busse, Durham, N. C., "Neurotic Problems in the Aged." Dr. Acors W. Thompson spoke on "Memorial Observance." The Associate was Dr. Benjamin B. Weisiger, III, Richmond, Va., who discussed "Newer Liver Function Tests."

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Dr. Lowell T. Coggeshall, Chicago, Ill., presented the presidential address on the subject, "The Problem of Change," and Dr. Lea C. Steeves, (Associate), Halifax, Nova Scotia, Can., discussed "The Dalhousie Postgraduate Program: An Experience in Continuing Medical Education," at the 69th Annual Meeting of the Association of American Medical Colleges at Philadelphia, Pa., October 13-15, 1958.

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Dr. Bernard C. Holland, (Associate), New York, N. Y., formerly Assistant Professor of Psychiatry at Columbia University College of Physicians and Surgeons, has been appointed Professor of Psychiatry at the Emory University School of Medicine, Atlanta, Ga.



During the months of October and November, Dr. Leo H. Crip, F.A.C.P., Pittsburgh, Pa., presented several papers at meetings in Europe and the Near East. The presentations included: "Autoimmune Diseases," at the International Congress of Allergy, Paris, France, October 24; "Immunologic Basis for Collagen Disease," before the Faculty of the School of Medicine, University of Perugia, Italy, October 31; "Outlook for the Treated Allergic Patient," before the Faculty of the Hebrew University in Jerusalem, Israel, November 4, 1958, and at the same University on November 8, "Clinical and Laboratory Experiences with the Newer Synthetic Steroids in Hypersensitiveness and in Allergy."

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Dr. E. Harold Hinman, F.A.C.P., Dean, University of Puerto Rico School of Medicine, San Juan, Puerto Rico, presented a paper entitled "University of Puerto Rico School of Medicine, Past, Present and Future," at a Symposium on Health Physics in Biology and Medicine sponsored by the School of Medicine and the U. S. Atomic Energy Commission at San Juan, Puerto Rico, recently.

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Dr. Federico Diez-Rivas, F.A.C.P., Santurce, Puerto Rico, presided at the Annual Meeting of the Puerto Rican Chapter of the American Heart Association held recently in Santurce, Puerto Rico. He was also recently appointed Cardiologist for the Bayamon District Hospital.

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Dr. Dolores Méndez Cashion, (Associate), San Juan, Puerto Rico, discussed the subject, "Pediatric Implications in Mental Deficiency," at the recent meeting of the Asociacion de Psicólogos de Puerto Rico held in San Juan, Puerto Rico.

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Brigadier General Joseph H. McNinch, F.A.C.P., (MC) U. S. Army, assumed his new duties as Commanding General of the newly-established Army Medical Service's Research and Development Command in the Army Surgeon General's Office, Washington, D. C., November 1, 1958. While returning to Washington from his former post as Surgeon, Headquarters, Armed Forces Far East, U. S. Eighth Army, Japan, General McNinch surveyed the Army's research activities in Asia and Europe. The research studies with which the new Army Medical Service Research and Development Command will be vitally concerned will include: continuing investigations of the medical effects of ionizing radiation and the medical prevention and treatment of these effects; the prevention and treatment of communicable diseases of importance to troops in overseas areas; surgical problems in the care of the burned and wounded; medical problems of operations under temperature extremes and other adverse environmental conditions; and the physiological and neuropsychiatric problems of military operations.

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The Annual Meeting of the Iowa Chapter of the Academy of General Practice held in Des Moines, Iowa, September 21-23, 1958, featured four Fellows of the College among the out-of-state speakers. They were: Drs. Priscilla White, Boston, Mass.; Francis D. Murphy, Milwaukee, Wis.; Nelson W. Barker, Rochester, Minn., and Clark H. Millikan, Rochester, Minn.

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The Lord Henry Cohen of Birkenhead, F.A.C.P., (Hon.), Liverpool, England, served as Visiting Professor of Medicine at the State University of New York College of Medicine at New York City, September 10-30, 1958. Lord Cohen is Chair-

man of the Standing Medical Advisory Committee of the Ministry of Health and is a Senior Physician at the Royal Infirmary in Liverpool.

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Six Fellows of the College were speakers at the 88th Annual Session of the Colorado State Medical Society, Colorado Springs, Colo., September 24-27, 1958. Included were: Drs. John Zarit and Harold D. Palmer, Denver, Colo.; Harold E. Himwich, Galesburg, Ill.; Jackson A. Smith, Omaha, Nebr.; Louis E. Prickman, Rochester, Minn., and Hyman J. Zimmerman, Chicago, Ill.

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Dr. Lyle A. Baker, F.A.C.P., Chief of Medical Services at Hines Veterans Hospital, Maywood, Ill., has resigned to become Chief Medical Advisor for the Philippine Memorial Hospital in Manila. He has been a staff member of the Veterans Administration for 27 years.

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Dr. Frederick M. F. Meixner, F.A.C.P., Peoria, Ill., has been awarded the Alma B. Fringer Memorial Award by the Illinois Tuberculosis Association for "outstanding service in the field of tuberculosis." Dr. Meixner is a former member of the Board of Directors of the National Tuberculosis Association.

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Three Fellows of the College were guest speakers at the 10th Annual Postgraduate Assembly held at Saint John's Hospital, Santa Monica, Calif. They included: Drs. Lester R. Dragstedt, Chicago, Ill.; Albert M. Snell, Palo Alto, Calif., and John C. Eagan, Los Angeles, Calif.

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Dr. Eugene P. Pendergrass, F.A.C.P., Philadelphia, Pa., recently received a distinguished service award from the University of North Carolina School of Medicine for "outstanding contributions to the field of medicine."

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The 26th Annual Assembly of the Omaha Mid-West Clinical Society featured three Fellows among the out-of-state speakers during the meeting held in Omaha, Nebr., November 3-6, 1958. The men and their subjects were: Dr. Thomas H. McGavack, Martinsburg, W. Va., "Fats or No Fats," "Diabetic Coma," "New Synthetic Steroids in Therapy," and "Critical Appraisal of Therapy with Oral Hypoglycemic Agents"; Dr. Benjamin M. Gasul, Chicago, Ill., "Recent Advances in Auscultation of the Heart in Infants and Children," "Salient Points in the Diagnosis of Rheumatic Heart Disease in Children," and "The Presentation of Interesting Diagnostic Cases with Congenital Malformation of the Heart"; Dr. W. Edward Chamberlain, Washington, D. C., "The Truth About the Dangers of Radiation," "The Natural History of Herniated Intervertebral Disc," "X-Ray in the Diagnosis of Diseases of the Chest," and "X-Ray in the Diagnosis of Gastrointestinal Lesions."

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Three Fellows of the College who are members of the staff of the Veterans Administration Hospital, Philadelphia, Pa., were recently appointed to academic posts in medical schools located in that city. Those included were: Dr. Ralph M. Myerson, Assistant Chief, Medical Service, named Clinical Professor of Medicine at Woman's Medical College of Pennsylvania; Dr. Bernard H. Pastor, Chief, Cardiovascular Section, as Assistant Professor of Clinical Medicine at the University of Pennsylvania School of Medicine, and Dr. Henry P. Close, Chief, Medical Service, Professor of Clinical Medicine at Temple University Medical School and Hospital.

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Dr. Roland Ladenson, (Associate), Columbia, Mo., has been elected President-Elect of the Missouri Heart Association.

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Dr. J. Lamar Callaway, F.A.C.P., Durham, N. C., has been elected President of the American Dermatological Association.

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Dr. Louis G. Welt, F.A.C.P., Chapel Hill, N. C., was elected President of the North Carolina Chapter of the Society of Sigma Xi recently.

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Dr. James W. Woods, Jr., F.A.C.P., Chapel Hill, N. C., was promoted from Assistant Professor to Associate Professor recently at the University of North Carolina School of Medicine.

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Dr. Ernest H. Yount, F.A.C.P., Winston-Salem, N. C., has been selected by the University of Chicago to receive its 1958 Distinguished Service Award in Medicine.

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Dr. Virgil P. Sydenstricker, M.A.C.P., Professor Emeritus of Medicine at the Medical College of Georgia, Augusta, Ga., recently received the seventh Goldberger Award in Clinical Nutrition.

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Dr. Frank H. Moore, F.A.C.P., Bowling Green, Ky., who is President of the Warren County Medical Society, has been elected President of the Kentucky Heart Association at a recent meeting in Louisville, Ky.

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Dr. June C. Shafer, F.A.C.P., Arlington, Va., was elected Secretary-Treasurer of the Washington (D. C.) Dermatological Society at a recent meeting of the Society.

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Dr. John Lansbury, F.A.C.P., Professor of Clinical Medicine at the Temple University School of Medicine, Philadelphia, Pa., recently received the largest single grant made to the school by the National Advisory Arthritis and Metabolic Diseases Council of the U. S. Public Health Services. The \$15,660 grant will finance graduate training in the department.

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Dr. C. Wilmer Wirts, F.A.C.P., Associate Professor of Medicine at The Jefferson Medical College of Philadelphia, Philadelphia, Pa., addressed the Medical Progress Assembly of the Birmingham Academy of Medicine on the subject, "Diseases of the Pancreas," on September 8, 1958, in Birmingham, Ala. He was also presented the key to the city by the Honorable James W. Morgan, Mayor.

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Dr. Howard A. Rusk, F.A.C.P., New York, N. Y., discussed the subject, "An Integral Part of Rehabilitation," at the 40th National Recreation Congress held in Atlantic City, N. J., September 22-26, 1958.

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Dr. Wilfred Dorfman, F.A.C.P., Brooklyn, N. Y., Secretary of the Academy of Psychosomatic Medicine, received an award of merit from the Academy during the 5th Annual Meeting held in New York, N. Y., October 9-11, 1958.

## NEW ELECTIONS TO MEMBERSHIP IN THE AMERICAN COLLEGE OF PHYSICIANS

On November 16, 1958, the Board of Regents, on recommendation of the Committee on Credentials, provided for the following elections. Those listed in FULL CAPITALS were elected to Fellowship; those in lower case were elected to Associateship.

ALAN LOUIS ABRAMS	San Francisco, Calif.
Charles Nicholas Accettola	Staten Island, N. Y.
Bernard Henry Adelson	Winnetka, Ill.
Seymour Stanley Adelson	Detroit, Mich.
William Nicholas Agostas	Augusta, Ga.
Carl Stuart Alexander	St. Paul, Minn. (VA)
James Kermott Alexander	Houston, Tex.
GOULD ARTHUR ANDREWS	Oak Ridge, Tenn.
Jesse Appel	Kew Gardens, N. Y.
William Ames Atchley	Belvedere, Calif.
John Lawrence Atkins	York, Pa.
ROBERT JAMES ATWELL	Columbus, Ohio
William George Bagnuolo	Mount Prospect, Ill.
David Baldwin	Chicago, Ill.
Robert Lange Barmeyer	Long Beach, Calif.
GEORGE RICHARD BARRY	Monroe, Wis.
DAVID PAUL BAUMANN	Tampa, Fla.
Edwin Dorrance Bayrd	Rochester, Minn.
OWEN WAYNE BEARD	Little Rock, Ark. (VA)
Robert Jerome Becker	Joliet, Ill.
Paul Maurice Beigelman	Encino, Calif.
E(lla) Cooper Bell	Philadelphia, Pa.
Martha Jeanne Bender	Brecksville, Ohio
Warren Bennett	Malden, Mass.
John Fisher Benson	High Point, N. C.
Charles Alden Berry	U. S. Air Force, M.C.
JOHN WALTNER BERRY	Clayton, Mo.
STEPHEN JOSEPH BERTE	M.C., U. S. Army
Lewis Henry Biben	Washington, D. C.
DAVID BIBER	Union, N. J.
Frank Nash Bilisoly, III	Norfolk, Va.
Arthur Allen Billings	Chicago, Ill.
John William Bisenius	Los Angeles, Calif.
RONALD CLARE BISHOP	Ann Arbor, Mich.
Thomas Mathews Blake	Jackson, Miss.
Ralph Guy Bonfiglio	Neenah, Wis.
SAUL PHILIP BRALOW	Philadelphia, Pa.
Robert Bertram Breitenbucher	Minneapolis, Minn.
Michael James Brennan	Grosse Pointe, Mich.
Herbert Robson Brettell	Littleton, Colo.
THOMAS WAYNE BREWER	Houston, Tex.
Bernard Brill	Brooklyn, N. Y.
ALBIN MONROE BRIXEY, JR.	Joliet, Ill.
David Bronsky	Chicago, Ill.
Donald Wilson Brooks	Halifax, N. S., Canada, R.C.N.
George Brown	New York, N. Y.

James Crawford Bruce ..... Greensboro, N. C.  
 WALTER ALBERT BRUSSOCK ..... Milwaukee, Wis.  
 ABRAHAM SOLOMON BUCHBERG ..... Ardsley, N. Y.  
 WILLIAM HORACE BULLOCK ..... Washington, D. C.  
 John Raymond Burbidge ..... Princeton, N. J.  
 Robert Ray Burch ..... New Orleans, La.  
 John Frederick Butterworth ..... Morristown, N. J.  
 PHILIP LARKIN BYERS ..... Kansas City, Mo.

Francis Anthony Campagna ..... San Francisco, Calif.  
 James Francis D. Cantelon ..... Toronto, Ont., Canada  
 Frank Peironnet Cantrell ..... Texarkana, Ark.  
 ANTHONY PAUL CAPUTI ..... Newport, R. I.  
 George Joseph Carroll ..... Suffolk, Va.  
 Robert Wells Carton ..... Winnetka, Ill.  
 Freeman Hamilton Cary ..... Decatur, Ga.  
 Bernard Henry Chaiken ..... Short Hills, N. J.  
 MELVIN M. CHERTACK ..... Skokie, Ill.  
 Joshua Jesse Chesnie ..... Toronto, Ont., Canada  
 Vernon Lonsdale Cofer, Jr. .... Norfolk, Va.  
 IRA BERNARD COHEN ..... New York, N. Y.  
 William Cohen ..... Montreal, Que., Canada  
 Monroe Coleman ..... Stamford, Conn.  
 Clifford Livingston Comrie ..... Regina, Sask., Canada  
 William Elliott Connor ..... Iowa City, Iowa  
 Julius Erwin Cook ..... Colorado Springs, Colo.  
 PATRICK J. V. CORCORAN ..... Evansville, Ind.  
 KENNETH RAYMOND CRISPELL ..... New York, N. Y.  
 James Carroll Crutcher ..... Chamblee, Ga. (VA)  
 James Allen Curtin ..... Buffalo, N. Y.

WILLIAM MONROE DAILY ..... Dallas, Tex.  
 Carlton Ralph Daniel, Jr. .... Jackson, Miss.  
 Abraham Wolffe Danish ..... Silver Spring, Md.  
 John Keay Davidson, III ..... Columbus, Ga.  
 William Ned Davis ..... Eloise, Mich.  
 MARVIN BUNCE DAY ..... Hartford, Conn.  
 Robert Elliott DeForest ..... M.C., U. S. Navy  
 JOSÉ ANGEL DE JESÚS ..... Caparra Heights, P. R.  
 Charlton deSaussure ..... Charleston, S. C.  
 Loren Thomas DeWind ..... Los Angeles, Calif.  
 Janet Dickens ..... Philadelphia, Pa.  
 Edward Raphael Dorney ..... Decatur, Ga.  
 CHARLES FREDERICK DOWNING ..... Decatur, Ill.  
 Bernard Joseph Doyle ..... Boston, Mass. (VA)  
 FRANK RODNEY DRAKE ..... Denver, Colo.  
 Tom Whatley Duke ..... Amarillo, Tex.  
 LEROY EDWARD DUNCAN, JR. .... Rockville, Md. (USPHS)  
 Bernice Elise Durgin ..... Bellefonte, Pa.  
 HARVEY JOSEPH DWORKEN ..... Cleveland, Ohio  
 RICHARD WARREN DYKE ..... Indianapolis, Ind.

Paul Gerard Ecker ..... Philadelphia, Pa.  
 Winston Milo Eddy ..... Burlington, Vt.



ARTHUR FRANCIS EDWARDES .....	Los Angeles, Calif.
Allan Manning Edwards .....	Edmonton, Alta., Canada
Jack Lewis Edwards .....	Medicine Hat, Alta., Canada
ROGER OLAF EGEBERG .....	Los Angeles, Calif.
Peter Liebert Eichman .....	Madison, Wis.
Robert Vincent Elliott .....	Denver, Colo.
Haskell Saul Ellison .....	Charleston, S. C.
George Frederick Elsasser, Jr. ....	Norfolk, Va.
RUDDOLF C. H. ENGEL .....	Portland, Ore.
George Entwisle .....	Towson, Md.
Byron David Epstein .....	Miami, Fla.
Martin Epstein .....	Trenton, N. J.
WILLIAM JAMES ERDMAN, II .....	Philadelphia, Pa.
JOSEPH SIDNEY FEIBUSH .....	New York, N. Y.
Richard Montgomery Fenno .....	U. S. Air Force, M.C.
Jennings Fershing .....	Los Angeles, Calif.
JOHN FRANCIS FINNEGAN .....	Washington, D. C.
David Armin Fischer .....	Denver, Colo.
Peter Fisher .....	Seattle, Wash.
REGINALD HEBER FITZ .....	Denver, Colo.
James Edward Fitzgerald .....	Washington, D. C.
Patrick Joseph Fitzgerald .....	Manchester, N. H. (VA)
Herman Jacob Flax .....	San Juan, P. R.
Sawyer Foster .....	Natick, Mass.
Wayne Lewis Fowler .....	Concordia, Kans.
Arthur Charles Fox .....	New York, N. Y.
Martin Nelson Frank .....	Glenside, Pa.
JOHN FRANKLIN .....	Norfolk, Va.
WILLIAM DONALD FRANKLIN .....	Bayside, N. Y.
Shervert Hughes Frazier, Jr. ....	Rochester, Minn.
LAWRENCE HERMAN GAHAGAN .....	New York, N. Y.
Paul Leslie Garrison .....	Winston-Salem, N. C.
ROBERT LINCOLN GILBERT .....	La Crosse, Wis.
Robert Bruce Gilbertson .....	Knoxville, Tenn.
Robert Byron Giles, Jr. ....	Dallas, Tex.
Rodney Robert Gleysteen .....	M.C., U. S. Navy
Michael Morton A. Gold .....	Montreal, Que., Canada
MILTON WILBERT GOLOMB .....	Pittsburgh, Pa.
JOSEPH GOODGOLD .....	Valley Stream, N. Y.
Elliott Louis Goodman .....	Havertown, Pa.
Benjamin Solomon Gordon .....	Brooklyn, N. Y. (VA)
GEORGE BYRON GORDON .....	Brooklyn, N. Y.
MARTIN ELI GORDON .....	New Haven, Conn.
James Hubert Gosman .....	Indianapolis, Ind.
Douglas Morris Gover .....	Springfield, Ill.
JOHN SELLS GRAETTINGER .....	Chicago, Ill.
Garth Kinsey Graham .....	Los Angeles, Calif.
Frederick Gordon Grant .....	Akron, Ohio
JOSEPH LEWIS GRANT .....	White River Junction, Vt. (VA)
DAVID HAYNIE GREGOR .....	Columbus, Ohio
ROBERT SID GREEN .....	Cincinnati, Ohio

- Richard Cranch Greenleaf .....Kenmore, Wash.  
 Sigmund Noel Groch .....New York, N. Y.  
 ARTHUR GLENN GROSCOST .....Sandusky, Ohio  
 John Livingston Grosh .....Lancaster, Pa.  
 George David Gross .....Salt Lake City, Utah  
 JOHN BURGESS GROSS .....Rochester, Minn.  
 PETER VINCENT GUGLIUZZA .....Hollis, N. Y.
- Jenaro Haddock-Suarez .....Rio Piedras, P. R. (VA)  
 Edward Oliver Hahn .....Fairview Park, Ohio  
 DAVID LUCIAN HALBERSLEBEN .....Boston, Mass.  
 Thomas Christopher Hall .....Boston, Mass.  
 Wilson Luther Hall .....Washington, D. C.  
 JOHN DALLAS HALLAHAN .....Media, Pa.  
 George Belgrove Hamilton .....M.C., U. S. Army  
 JAMES FRANCIS HAMMARSTEN .....Oklahoma City, Okla. (VA)  
 Cecil Edward C. Harris .....Mount Royal, Que., Canada  
 Arthur Haut .....Salt Lake City, Utah  
 Arthur Charles Heineman, Jr. ....Pittsburgh, Pa.  
 Herman Kopel Hellerstein .....Cleveland, Ohio  
 LEON DAVID HELLMAN .....New York, N. Y.  
 WALTER LESTER HENRY, JR. ....Washington, D. C.  
 Samuel Richardson Hill, Jr. ....Birmingham, Ala.  
 IRWIN HOFFMAN .....Cedarhurst, N. Y.  
 Robert Steadham Hogan .....Birmingham, Ala.  
 LEO EDWARD HOLLISTER .....Menlo Park, Calif. (VA)  
 John Creasey W. Hopkyns .....Edmonton, Alta., Canada  
 Joseph Thomas Horgan .....M.C., U. S. Navy  
 David Stanley Huber .....Pittsburgh, Pa.  
 Willis Lester Hubler .....Caldwell, Idaho  
 Albert Mathew Huggins .....St. Louis, Mo.  
 FRANCIS LEE HUMMER .....Madison, Wis.  
 Charles Wesley Humphreys, Jr. ....Washington, D. C.  
 Fred Mead Hunter .....New Orleans, La.  
 Harry James Hurley, Jr. ....Upper Darby, Pa.
- William Robert Irby .....Richmond, Va.
- Carmault Benjamin Jackson .....U. S. Air Force, M.C.  
 Harold Jacobziner .....New York, N. Y.  
 Israeli Aaron Jaffe .....New York, N. Y.  
 Robert Watt Jamison .....Walla Walla, Wash.  
 JAMES AUSTIN JENNIGAN .....U. S. Air Force, M.C.  
 Everett Horace Johnson .....Turlock, Calif.  
 Lewis Edward Jones .....Hampton, Va. (VA)  
 Richard Henry Jowitt .....Indianapolis, Ind.  
 Claude Reuben Joyner, Jr. ....Philadelphia, Pa.  
 RODNEY CLIFTON JUNG .....New Orleans, La.  
 John Bahan Justus .....Kansas City, Mo.
- Henry David Kaine .....Detroit, Mich.  
 Harry Jerome Kani. ....Milwaukee, Wis.  
 Allan Arthur Kaplan .....Miami Beach, Fla.

William Sidney Karlen .....	Newark, N. J.
EUGENE MAURICE KATZIN .....	Newark, N. J.
MANUEL KAUFMAN .....	Brookline, Mass.
DONALD CHARLES KENT .....	M.C., U. S. Navy
Sidney Beemer Kern .....	U. S. Air Force, M.C.
Randall Marvin Kersten .....	San Bernardino, Calif.
Russell Hart Kesselman .....	Philadelphia, Pa.
James Patrick Kiely .....	La Jolla, Calif.
Reynold Edward Klages, Jr. ....	Columbus, Ohio
Ben Zion Klatch .....	Lafayette, Ind.
Donald Richard Koerner .....	Rochester, N. Y.
Earl John Kolb, Jr. ....	U. S. Air Force, M.C.
DUVAL HOLTZCLAW KOONCE .....	Jackson, Tenn.
John Myron Koval .....	Coral Gables, Fla.
JAMES EDWIN KREISLE .....	Austin, Tex.
George Kroll .....	Chicago, Ill.
LAWRENCE SYDNEY KRYLE .....	Roslyn Heights, N. Y.
Jesse Paul Kuperman .....	Dayton, Ohio
Sherman Kupfer .....	New York, N. Y.
Lawrence Edward Lamb .....	San Antonio, Tex.
Ray Price Landes .....	Souderton, Pa.
Jackson Wiley Landham, Jr. ....	Griffin, Ga.
Lyon Lapin .....	Montreal, Que., Canada
John Henry Laragh .....	New York, N. Y.
Susanne Elliott Larsh .....	Chicago, Ill.
IRVING ISRAEL LASKY .....	Los Angeles, Calif.
IRENE FRANCES LAUB .....	Easton, Pa.
CHARLES ANDREW LAUBACH, JR. ....	Danville, Pa.
Charles Trumbull Lee, Jr. ....	Philadelphia, Pa.
SAMUEL RICHARDSON LEHRMAN .....	New York, N. Y.
JORMA MICHAEL LEINASSAR .....	Astoria, Ore.
Seymour Lerner .....	East Rockaway, N. Y.
HERBERT GEORGE LEVIN .....	Detroit, Mich.
LEO HOWARD LEVINE .....	New York, N. Y.
Peter Maule Lewis .....	Riverside, Calif.
Lawrence Spencer Lilienfield .....	Washington, D. C.
Arthur Lind .....	New York, N. Y.
Olaf Victor Lindelow .....	Bismarck, N. D.
John David Lindsay, Jr. ....	Fairmont, W. Va.
William Soy Ming Ling .....	New York, N. Y.
Matthew Owen Locks .....	Westport, Conn.
John Philip Loge .....	Redlands, Calif.
ALFONSO ANTHONY LOMBARDI .....	New York, N. Y.
Grady Estes Longino .....	Dublin, Ga. (VA)
Samuel Dennis Loube .....	Washington, D. C.
Alfred Charles Lowy .....	New York, N. Y.
Carl Freeman Luckey .....	Florence, Ala.
NORTON M. LUGER .....	Fresh Meadows, N. Y.
David Lukens .....	Hutchinson, Kans.
Warner Beale Lutz .....	Columbus, Ohio
Richard Vance Lynch, Jr. ....	Clarksburg, W. Va.

Armand Mandel .....	Parma Heights, Ohio
Richard Hess Mann .....	Lancaster, Pa.
ANDREW MENGES MARGILETH .....	M.C., U. S. Navy
Albert Americo Martucci .....	Philadelphia, Pa.
ROBERT JAMES MARVEL .....	Indianapolis, Ind.
James Dunn Mason, Jr. ....	Petersburg, Va.
KENNETH PINE MATHEWS .....	Ann Arbor, Mich.
William John Matre .....	Dayton, Ohio (VA)
Walter Vincent Matteucci .....	Philadelphia, Pa.
Raymond John Maxwell .....	New York, N. Y.
Peter Paul Mayock, Jr. ....	Sayre, Pa.
Marshall Edward McCabe .....	M.C., U. S. Army
John Patrick McCann .....	U. S. Air Force, M.C.
William Creighton McClintock .....	Pittsburgh, Pa.
Patrick Francis McCormack .....	Loudonville, N. Y. (VA)
Carolyn Moore McCue .....	Richmond, Va.
Allen Kier McGrath, Jr. ....	Los Gatos, Calif.
Henry Deane McIntosh .....	Durham, N. C.
Francis Gilbert McMahon .....	Madison, Wis. (VA)
Robert Joseph McManus .....	Auburn, N. Y.
Kenneth John McNiece .....	Santa Barbara, Calif.
John English McWhorter .....	Englewood, N. J.
Alan Sherwood Medoff .....	Teaneck, N. J.
GORDON MEIKLEJOHN .....	Denver, Colo.
Joseph Thomas Melton .....	U. S. Air Force, M.C.
Jean Joseph Mercier .....	Ottawa, Ont., Canada
H(ENRY) CLARKSON MEREDITH, JR. ....	Norfolk, Va.
WILLIAM HYDE MERONEY, III .....	M.C., U. S. Army
Joseph Melton Merrill .....	Nashville, Tenn. (VA)
Robert Scott Merrill .....	Cleveland Ohio
John Edward Merriman .....	Saskatoon, Sask., Canada
Elliott Middleton, Jr. ....	Upper Montclair, N. J.
David Cheatham Miesch .....	Paris, Tex.
FRANKLIN RUSH MILLER .....	Winfield, Kans.
JOSEPH MORTON MILLER .....	Boston, Mass.
Lewis Craig Mills, Jr. ....	Philadelphia, Pa.
Oscar George Mills .....	Oshawa, Ont., Canada
WILLIAM ROBERT MILNOR .....	Baltimore, Md.
Albert Minzter .....	East Orange, N. J.
Robert Edgar Mitchell, Jr. ....	Richmond, Va.
Francis Xavier Moore .....	East Norwich, N. Y.
WARREN WOODMAN MOORMAN .....	Fort Worth, Tex.
Dennis Alfred J. Morey .....	Richmond, Va.
FRANK MATTISON MORGAN, JR. ....	Glendale, Calif.
John Wilkinson Moynihan .....	Dearborn, Mich. (VA)
John Paul Muhleisen .....	New Orleans, La. (VA)
DONALD SPENCER MUNROE .....	Vancouver, B. C., Canada
Ralph Alton Murphy, Jr. ....	Atlanta, Ga.
Charles Edgar Myers .....	Kingston, Pa.
WARREN POWERS LAIRD MYERS .....	Rye, N. Y.
FREDERICK LEVERING NEELY .....	Atlanta, Ga.
Richard John Nelson .....	Salt Lake City, Utah

- Hans Werner Neuberger ..... New York, N. Y.  
 MORRIS NEWBERG ..... Queens Village, N. Y.  
 GLENN CARRAWAY NEWMAN ..... Clinton, N. C.  
 Jerry Irving Newman ..... Canton, Ohio  
 BYRON ATLEE NICHOL ..... M.C., U. S. Army  
 Orville Felt Nielsen ..... M.C., U. S. Navy  
 OLIVER K. NIESS ..... U. S. Air Force, M.C.  
 WILLIAM JOSEPH NOBLE ..... Manhasset, N. Y.
- JACOB L. OBERMAN ..... New York, N. Y.  
 John Joseph O'Brien ..... Buffalo, N. Y.  
 WILLIAM AUSTIN O'BRIEN, JR. .... Minneapolis, Minn.  
 Joseph Vincent O'Donnell ..... St. Louis, Mo.  
 Valentine O'Malley ..... St. Paul, Minn.  
 John William Ord ..... U. S. Air Force, M.C.  
 EDWIN MARVIN ORY ..... Houston, Tex.  
 ARTHUR HAZLETON OWENS ..... Birmingham, Ala.
- THOMAS FITE PAINE, JR. .... Birmingham, Ala.  
 Joseph Thomas Painter ..... Houston, Tex.  
 Stanley Morton Pariser ..... Cleveland, Ohio (VA)  
 PATRICK SAMUEL PASQUARIELLO ..... Philadelphia, Pa.  
 Alton Morton Paull ..... Pawtucket, R. I.  
 MORRIS PEARLMUTTER ..... New York, N. Y.  
 ALFRED WILLIAM PENNINGTON ..... Newark, Del.  
 EDWARD LOUIS PERRY ..... La Crosse, Wis.  
 HENRY AUGUSTUS PETERS ..... Madison, Wis.  
 EDWARD SCHMIDT PETERSEN ..... Chicago, Ill.  
 WESLEY LEROY PETERSON, JR. .... Sarasota, Fla.  
 Anastas Thomas Petro ..... Jamestown, N. Y.  
 CLIFFORD GEORGE PILZ ..... Chicago, Ill. (VA)  
 Joseph Orlando Piscetta ..... West Englewood, N. J.  
 ROBERT ALEXANDER POLSON ..... Winnipeg, Man., Canada  
 HAROLD ZVY POMERANTZ ..... Montreal, Que., Canada  
 Samuel Cutler Poole ..... Atlanta, Ga.  
 Peyton Thomas Pratt ..... Omaha, Nebr.  
 Delbert Victor Preheim ..... Newton, Kans.  
 Jack Eugene Presberg ..... Rochester, N. Y.  
 NEWTON GEORGE PRITCHETT ..... Raleigh, N. C.  
 CURTIS PROUT ..... Dedham, Mass.  
 RAOUL CONSTANTINE PSAKI, JR. .... M.C., U. S. Army
- Burch Vandon Raley ..... Little Rock, Ark. (VA)  
 James MacDonald Reece ..... Sacramento, Calif.  
 Stanley Reichman ..... New York, N. Y.  
 JACK REISS ..... Coral Gables, Fla. (VA)  
 HENRY RENFERT, JR. .... New York, N. Y.  
 James Cipriano Respass ..... Charlottesville, Va.  
 CHARLES RESSLER ..... New York, N. Y.  
 Seymour Ribot ..... East Orange, N. J.  
 GLENN HICKAM RICHMOND ..... Aurora, Ill.  
 ALLEN DAVID RIEMER ..... Denver, Colo.  
 Carroll Herbert Robie, Jr. .... Louisville, Ky.



ROGER WILLIAM ROBINSON .....	Worcester, Mass.
Eugene Jack Rogers .....	Brooklyn, N. Y.
Wayne Russell Rogers .....	Portland, Ore.
Harold Lazar Rolbin .....	New York, N. Y.
MELVIN DAVID ROSEMAN .....	Boston, Mass.
RENO ROSI .....	Chicago, Ill.
William Ruberman .....	Brooklyn, N. Y.
Herbert Bernard Rubin .....	San Gabriel, Calif.
Sylvester James Ryan .....	Waterbury, Conn.
Marvin Leonard Sachs .....	Philadelphia, Pa.
Charles Henry Sackett .....	Lynchburg, Va.
Philip Samet .....	Miami Beach, Fla.
Don Emerson Sando .....	Dayton, Ohio
John Paul Sauvageot .....	Akron, Ohio
Frank John Schaffer .....	Washington, D. C. (VA)
William F. Schmidt .....	Norton, Va.
CHARLES SCHNALL .....	Philadelphia, Pa.
Harold Warren Schnaper .....	Bethesda, Md.
Conrad Theodore H. Schroeder .....	Staten Island, N. Y.
DWIGHT WILLIAM SCHUSTER .....	Indianapolis, Ind.
James Lee Scott .....	Salt Lake City, Utah
NORMAN McLEAN SCOTT, JR. ....	M.C., U. S. Army
Wilbert Ewing Scott, Jr. ....	Amarillo, Tex.
Lydia Marie Seebach .....	Oakland, Calif.
ALBERT SEGALOFF .....	New Orleans, La.
MARTIN HENRY SEIFERT .....	Wilmette, Ill.
ARTHUR SELZER .....	San Francisco, Calif.
Jules R. Setnor .....	Springfield, Mass.
Robert Dodge Shaver .....	Covina, Calif.
Louis Sheiman .....	New York, N. Y.
HERBERT GREGORY SHEPLER .....	M.C., U. S. Navy
Daniel Allan Sherber .....	New Rochelle, N. Y.
Harold Eugene Shuey .....	M.C., U. S. Army
WILLIAM HENRY SHULL .....	Charlotte, N. C.
Maurice Lathan Sievers .....	St. Louis, Mo. (USPHS)
Lawrence Silver .....	Patchogue, N. Y.
Herbert Stanwood Sise .....	Boston, Mass.
Robert William Sjogren .....	Washington, D. C.
RAY HAMILTON SKAGGS .....	Houston, Tex.
Norman Rose Sloan .....	Honolulu, Hawaii
Berkeley Slutzker .....	Dayton, Ohio (VA)
Ballard Franklin Smith .....	Fort Lauderdale, Fla.
CLARENCE ALBERT SMITH .....	Atlanta, Ga. (USPHS)
Ernest Wendell Smith .....	Baltimore, Md.
Frank Page Smith .....	Balboa Heights, Canal Zone
Josef Riley Smith .....	Jackson, Miss.
Joseph Anthony Smith .....	Glenside, Pa.
Roger Carlton Smith .....	Fort Wayne, Ind.
Marcus Frank Sohmer, Jr. ....	Winston-Salem, N. C.
Walter Solomon .....	New York, N. Y.
Ross Baker Sommer .....	St. Louis, Mo.
CLIFFORD LEROY SPINGARN .....	New York, N. Y.

Steven Joseph Spinuzza .....	Chicago, Ill.
Albert William Stahman .....	Brooklyn, N. Y.
Ralph John Stalter .....	Bethel Park, Pa.
Ronald Leland Stanford .....	Montreal, Que., Canada
WILLIAM WHITE STEAD .....	Gainesville, Fla.
JOSEPH MAXWELL STEIN .....	Camden, N. J.
FRANZ ULRICH STEINBERG .....	St. Louis, Mo.
Sherman Millard Steinzeig .....	Kansas City, Kans.
Charles Edward Stilgenbauer .....	Bakersfield, Calif.
SYDNEY STONEHILL .....	Rochester, N. Y.
D(ESTINY) EDMUND STOREY .....	Indianapolis, Ind.
Sol Singer Strauss .....	Chicago, Ill.
James Francis Sullivan .....	St. Louis, Mo.
Borys Surawicz .....	Burlington, Vt.
James Clark Syner .....	M.C., U. S. Army
Edward James Tallant .....	Detroit, Mich.
Frederick Nichols Talmers .....	Dearborn, Mich. (VA)
Walter Ashton Tatge .....	San Francisco, Calif.
DONALD ERNEST TAYLOR .....	Niagara Falls, N. Y.
Frank Eugene Taylor .....	Roanoke, Va.
Allison Dodd Teaze .....	Upper Montclair, N. J.
J(OSEPH) EDWARD TETHER .....	Indianapolis, Ind.
Mary Alice H. Thomas .....	Euclid, Ohio
William Clark Thomas, Jr. ....	Gainesville, Fla.
DAVID CUSHMAN THURBER .....	Rochester, N. Y.
Robert Louis Todd .....	Burlington, Iowa
ALBERT TOMASULO .....	Dayton, Ohio (VA)
JOSE MANUEL TORRES-GOMEZ .....	San Juan, P. R.
FRANK MARION TOWNSEND .....	U. S. Air Force, M.C.
Albert Barnet Tucker .....	Newark, N. J.
William Taylor Tucker .....	Richmond, Va.
Patricia Breed Tudbury .....	Pomona, Calif.
Linton Wilde Turner .....	Philadelphia, Pa.
Edward James Twin .....	Kansas City, Mo.
Joseph Charles Tyor .....	Denver, Colo.
de Guise Vaillancourt .....	Montreal, Que., Canada
Robert William Van Der Flier .....	Port Arthur, Ont., Canada
RAY ALFRED VAN OMMEN .....	Cleveland, Ohio
LOUIS ENRIQUE VITERI .....	Mount Holly, N. J.
GORDON STANLEY VOORHEES .....	Leavenworth, Kans.
Harold Wilbur Voth .....	Kansas City, Mo.
Fred Warren Wachtel .....	Newark, N. J.
Dean Crittenden Walker .....	Tulsa, Okla.
GEORGE CHARLES WALSH .....	Vancouver, B. C., Canada
Roscoe Wendell Ward .....	South Orange, N. J.
William Quincy Ward .....	Russellville, Ala.
David Lester Warren .....	Manchester, Conn.
David Saul Wax .....	Mt. Vernon, N. Y.
Robert Stanley Weinhaus .....	St. Louis, Mo.
ANDOR ALVIN WEISS .....	New York, N. Y. (VA)

HARRY ANTHONY WEISS .....	M.C., U. S. Navy
Julius Wenger .....	Atlanta, Ga. (VA)
KELLY McGUFFIN WEST .....	Oklahoma City, Okla.
Howard Jerome Wetstone .....	Hartford, Conn.
Charles Lowndes Whisnant, Jr. ....	Atlanta, Ga.
Alexander Bialywlos White .....	Park Forest, Ill.
JACOB SAMUEL WIENER .....	Philadelphia, Pa.
DeLore Williams .....	West Allis, Wis.
Robert Leon Williams .....	U. S. Air Force, M.C.
PARK WEED WILLIS, III .....	Ann Arbor, Mich.
GEORGE WYMAN WILLISON .....	Evansville, Ind.
Donald Laurence Wilson .....	Kingston, Ont., Canada
William LeRoy Wilson .....	Philadelphia, Pa.
MARVIN NORMAN WINER .....	Buffalo, N. Y.
William Alcott Wolfe .....	Bellevue, Wash.
Leonard Wolsky .....	Woburn, Mass.
Joshua Powell Wood .....	San Bernardino, Calif.
Harry Max Woske .....	Swarthmore, Pa.
Harry Conold Zaenger .....	Toledo, Ohio
HARRY FREDERICK ZINSSER, JR. ....	Philadelphia, Pa.

## OBITUARIES

The College records with sorrow the deaths of the following members. Their obituaries will appear later in these columns.

- Dr. Rodney Waldo Bliss, F.A.C.P., Oklahoma City, Okla., September 5, 1958  
Dr. Daniel Milton Brumfiel, F.A.C.P., Saranac Lake, N. Y., August 20, 1958  
Dr. Arturo Carbonell, F.A.C.P., Arlington, Va., July 16, 1958  
Dr. Edgar Francis Cosgrove, F.A.C.P., Pittsburgh, Pa., September 3, 1958  
Dr. John Philips Henry, F.A.C.P., Memphis, Tenn., July 4, 1958  
Dr. Allan Souter Kennedy, F.A.C.P., Hamilton, Ont., Can., September 13, 1958  
Dr. Alfred Labensky, F.A.C.P., New London, Conn., July 7, 1958  
Dr. Harry David Leinoff, F.A.C.P., New York City, July 21, 1958  
Dr. Ellis Dice Lineberry, F.A.C.P., Birmingham, Ala., September 6, 1958  
Dr. Daniel Joseph McCarthy, F.A.C.P., Philadelphia, Pa., October 9, 1958  
Dr. Ralph J. McMahon, F.A.C.P., Binghamton, N. Y., September 10, 1958  
Dr. Joseph William McMeans, F.A.C.P., Anderson, S. C., September 2, 1958  
Dr. Charles Frank Morsman, F.A.C.P., Hot Springs, S. D., September 25, 1958  
Dr. Edwin William Rodenheiser, F.A.C.P., Upper Darby, Pa., September 24, 1958  
Dr. Nathan Swern, F.A.C.P., Trenton, N. J., July 27, 1958  
Dr. G. Richarda Williamson, F.A.C.P., New Orleans, La., September 19, 1958

## DR. DANIEL MILTON BRUMFIEL

Dr. Daniel Milton Brumfiel, F.A.C.P., was born in Fayette County, Indiana, on January 20, 1890, and died at his home in Saranac Lake, New York, on August 20, 1958. He attended Lombard College where he received his A.B. degree in 1912. At the University of Illinois he received his Master's degree in 1913, and his Ph.D. from the University of Iowa in 1917. In 1924, he was awarded an M.D. degree from The Johns Hopkins School of Medicine.

Dr. Brumfiel was associated with the Department of Internal Medicine at the Henry Ford Hospital in Detroit from 1924 to 1925 and thence to Saranac Lake as a patient at Trudeau Sanatorium. Following recovery, he was associated with Dr. Francis B. Trudeau, Sr., from 1928 to 1930. Later, he opened his office and continued to practice at Saranac Lake until his final illness.

He was a member of the Medical Society of New York State; a former President of the Franklin County Medical Society; Vice President of the Saranac Lake Tuberculosis Society; a former President of the local Chapter of the American Red Cross and a member of the National Tuberculosis Association and the American Heart Association. He was a Diplomate of the American Board of Internal Medicine and became a Fellow of the American College of Physicians in 1941.

A man of wide community interests, he was active in community affairs, as well as a leader in his profession. Lastly, it should be noted that he had sufficient interest in writing to compose several articles. One was published in *Esquire* entitled "No Room." This concerned the failure of Joseph and Mary to obtain shelter before the birth of the Christ Child.

He is survived by his wife, Mrs. Katherine Rutledge Brumfiel, 22 Catherine Street, Saranac Lake, New York.

JOHN H. TALBOTT, M.D., F.A.C.P.,  
A.C.P. Governor for Western New York

**COLONEL ARTURO CARIONELL, (M.C.), U.S.A., (Ret.)**

Colonel Arturo Carbonell, F.A.C.P., (M.C.), U.S.A., (Ret.), of Arlington, Virginia, died at Walter Reed Army Hospital, Washington, D. C., on July 16, 1958, of myocardial infarction.

Colonel Carbonell was born on August 28, 1888, in Cabo-Rojo, Puerto Rico, and lived in that country until 1904 when he came to the United States to attend Frederick College, Maryland. He received his M.D. degree from The Jefferson Medical College of Philadelphia in 1911 and returned to Puerto Rico to intern at the Bayaja Hospital, San Juan. In 1912 he was commissioned into the Medical Corps of the Regular Army and served in Puerto Rico and Panama, Canal Zone, until 1920. During the next ten years he served in various capacities as an internist at Fort Thomas, Kentucky; Fort Sam Houston, Texas, and Letterman General Hospital, California. From 1930-32 Colonel Carbonell served as Chief of the Medical Service, Sternberg General Hospital, Philippine Islands, and as Section Chief on the Medical Service, Walter Reed Army Hospital from 1932-36. He served as Chief of Medicine and later as Post Surgeon at the U. S. Military Academy, West Point, New York. In 1947 Colonel Carbonell again went overseas to become Chief of Medicine and Commanding Officer of Tripler General Hospital. He returned to the United States in 1948 and retired after having served in the Army Medical Corps for 36 years.

Following his retirement Colonel Carbonell was appointed Director, Outpatient Services, Jackson Memorial Hospital, Miami, Florida. In 1950 he was recalled to active duty and served as a member of the Army Physical Review Council, Washington, D. C., until June 1952, when he again reverted to retired status.

Colonel Carbonell remained actively engaged in the practice of internal medicine throughout most of his Army career. There were periods of command and staff duties which he filled with outstanding efficiency, but his primary interest was in the care of patients and instruction of younger medical officers. He continued to expand his own knowledge throughout his career, having received postgraduate training at the Army Medical School; Columbia University School of Medicine, Mount Sinai and Post-Graduate Hospitals, New York; and Touro Infirmary, New Orleans.

He was a member of the American Medical Association and the Association of Military Surgeons; a Diplomate of the American Board of Internal Medicine; and a Fellow of the American College of Physicians, 1932.

Colonel Carbonell was truly a great doctor, versed in the art as well as the science of medicine. He was loved and admired by his patients and colleagues, especially those who had the good fortune to follow in his footsteps.

He is survived by his widow, Mrs. Gloria H. Carbonell, 300 North Edison Street, Arlington, Virginia, and two sons, Colonel Arthur J. Carbonell, Medical Corps, U.S.A., stationed at Patterson Army Hospital, New Jersey, and Major Waldo L. Carbonell, Ordnance Corps, U.S.A., on duty with the ROTC Unit at Cornell University.

**BRIGADIER GENERAL CARL W. TEMPEL, M.C., U.S.A.**

**DR. DAVID MILTON KURSCHNER**

Dr. David Milton Kurschner, (Associate), was born November 4, 1903, in Austria and died on April 26, 1958, in New York City, of acute pulmonary edema.

Dr. Kurschner received his degree of Bachelor of Science at the University of South Dakota in 1929, and the degree of Doctor of Medicine at the University of Illinois College of Medicine in 1931. He interned at the Jersey City Medical Center, Jersey City, New Jersey, 1931-1932.

His postgraduate training included: Mount Sinai Hospital, 1942-46; Montefiore



Hospital, 1942-48; Internal Medicine, Bellevue Hospital IV Division, 1944 and Diabetes Mellitus, Harvard Medical School, 1949. His hospital appointments were as follows: Associate Attending Physician in Internal Medicine and Metabolic Diseases and Chief of Diabetes Outpatient Department, Lebanon Hospital; Associate in Internal Medicine, Home and Hospital of the Daughters of Jacob.

Dr. Kurschner was a member of the following: American Medical Association; Medical Society of the State of New York; Bronx County Medical Society (Second Vice President, 1953); New York Diabetic Association and American Diabetic Association. He was a Diplomat of the American Board of Internal Medicine and an Associate of the American College of Physicians since 1951.

He is survived by his wife, Mrs. Martha Kurschner, 2025 Valentine Avenue, Bronx 57, New York. His confreres note with sincere regret the passing of Dr. Kurschner.

IRVING S. WRIGHT, M.D., F.A.C.P.,  
Governor, Eastern Division,  
New York State

#### DR. HARRY D. LEINOFF

Dr. Harry D. Leinoff, F.A.C.P., was born September 5, 1904, in Russia, and died on July 21, 1958, in New York City from a myocardial infarction.

Dr. Leinoff received his Doctor of Medicine degree at the New York Medical College, Flower and Fifth Avenue Hospitals in 1927. He interned at Harlem Hospital, New York City, 1928-29.

His postgraduate training was in tuberculosis, Otisville Tuberculosis Hospital, 1929.

His hospital appointments were as follows: Associate Professor of Medicine and Associate Attending Physician, New York Medical College, Flower and Fifth Avenue Hospitals and Associate Attending Physician, Metropolitan Hospital. He served as Captain (MC) A.U.S., during 1942-46.

Dr. Leinoff was a member of the following: American Medical Association; New York State and County Medical Societies; New York State and County Homeopathic Societies. He was a Diplomat of the American Board of Internal Medicine and a Fellow of the American College of Physicians since 1945. He had many articles published in the leading medical journals.

He is survived by his wife, Mrs. Helen Leinoff, 14 Vernon Drive, Scarsdale, New York. It is with sincere regret his loss is recorded.

IRVING S. WRIGHT, M.D., F.A.C.P.,  
Governor for Eastern New York

#### DR. ELLIS DICE LINEBERRY

Dr. Ellis Dice Lineberry, F.A.C.P., died of acute myocardial infarction, September 6, 1958. With his death, the City of Birmingham and the community lost a skilled and much beloved physician. The institutions which he served lost an excellent clinician and a wise counselor.

Dr. Lineberry was born at Galax, Virginia, October 5, 1901. He received his pre-medical work at the University of Virginia and received his medical degree from the University of Virginia School of Medicine in 1926. He interned at Virginia Mason Hospital, Seattle, Washington, 1926-27. Following this, he had a four-year Fellowship in Internal Medicine, 1927-31, at the Mayo Foundation.

In 1931, he entered the practice of medicine in Birmingham and became Chief of

Medical Service in the Carraway Methodist Hospital and Norwood Clinic. He was on the Consulting Staff of the Hillman Hospital. He was active in the teaching program of the Medical College of Alabama for many years, holding the rank of Associate Professor.

Dr. Lineberry served as A.C.P. Governor for Alabama from 1946 to 1954. He always displayed a deep and abiding interest in and loyalty to the American College of Physicians. He was a ready counselor to young men interested in careers in internal medicine.

Dr. Lineberry served as President of the Jefferson County Medical Society and of the Birmingham Society of Internists. He was a member of the Jefferson County Medical Association and the State of Alabama Medical Association and was a Fellow of the American Medical Association. He became a Diplomate of the American Board of Internal Medicine in 1940. He entered the American College of Physicians as an Associate in 1940, and was elected a Fellow in 1943.

Dr. Lineberry was author of a number of published papers.

The profound sympathy of the American College of Physicians is extended to his widow, Mrs. Katherine Lineberry, 4209 Clairmont Avenue, Birmingham, Alabama, and his son and three daughters.

D. O. WRIGHT, M.D., F.A.C.P.,  
Governor for Alabama

#### DR. FRANK J. MILLOY, SR.

Dr. Frank J. Milloy, Sr., F.A.C.P., died at his home in Phoenix, Arizona, on August 5, 1958, after an illness of several months. Dr. Milloy was born in Omimee, North Dakota, on March 1, 1894.

He received his preliminary education at North Dakota University and then graduated from Northwestern University Medical School in 1920. After an internship in Mercy Hospital in Chicago, Illinois, he came to Phoenix where he practiced for many years in association with Dr. E. Payne Palmer, Sr., one of the founders of the American College of Surgeons. He was closely associated with the intern and nurses training program at St. Joseph's Hospital.

He was a Diplomate of the American Board of Internal Medicine, and a Fellow in the American College of Physicians since 1931. He served as Secretary for the Arizona State Medical Association for 10 years and was Editor of its official publication, *Arizona Medicine*, during most of that time. He was a member of the American Medical Association, the Southwestern Medical Society, the Maricopa County Medical Society, and served in many capacities both in the County and State medical societies. He was one of the original members of the Phoenix Clinical Club and remained active in the weekly C.P.C. discussions until only a few months before his death. He took an active part in civic and religious affairs and on his death was memorialized by his associates in the County Medical Society. His service to Arizona and the medical profession had an unselfish, kindly and permanent effect on this community. His loss is keenly felt.

Dr. Milloy is survived by his wife, Mrs. Ola Sue Milloy of 18 North Country Club Drive, Phoenix, Arizona; two daughters, Mary Elizabeth Milloy of San Francisco, California, and Mrs. Kathleen (Stephen R.) Mulligan of San Diego, California; and a son, Frank J. Milloy, Jr., M.D., Chief Assistant Surgeon, Illinois State Tuberculosis Hospital, Chicago, Illinois.

LESLIE R. KOBER, M.D., F.A.C.P.,  
Phoenix, Arizona

## DR. LOUIS CLIFFORD MORRIS

Dr. Louis C. Morris of Chicago died of a myocardial infarction on February 23, 1958. He was born in Chicago on July 3, 1900. He received his M.D. degree from Rush Medical College in 1927, interned at Michael Reese Hospital the following year, and practiced medicine in Chicago for the rest of his life except for several trips for postgraduate training and for four years of service in the Navy during World War II. He was a specialist in chest diseases and epidemiology.

He served in the United States Navy from 1942 to 1946. He was Commanding Officer of the U. S. Naval Hospital at Palermo, Sicily, in 1945. His rank on discharge from the Navy was Commander.

He was an Attending Physician at Grant, Hines, Cook County, and Weiss Memorial Hospitals. He was a Consulting Physician to the Municipal Tuberculosis Sanitarium.

Dr. Morris was a member of the faculty of Northwestern University Medical School from 1934 until his death. For the last several years he was an Assistant Professor. He was certified by the American Board of Internal Medicine in 1946 and as a subspecialist in diseases of the chest in 1947.

His society memberships included: the American Medical Association; American College of Chest Physicians; American Trudeau Society; and Illinois and Chicago Medical Societies. He was an Associate member of the American College of Physicians.

Dr. Morris was a valued member of our community. His death is a serious loss. He is survived by his widow, Mrs. Beatrice K. Morris, 2007 Seward Street, Evanston, Illinois.

WRIGHT ADAMS, M.D., F.A.C.P.,  
Governor for Northern Illinois

## DR. CHARLES FRANK MORSMAN

Dr. Charles Frank Morsman, F.A.C.P., died in Hot Springs, South Dakota, on September 25, 1958, as the result of a coronary attack suffered four days previously. He was born in Elmore, Illinois, on January 4, 1880.

Dr. Morsman received the degree of Doctor of Medicine from the College of Medicine of the University of Nebraska in 1902. His postgraduate training was taken at the Postgraduate Schools of Medicine at the University of Illinois, Harvard University and of New York University.

From 1939 until his death, Dr. Morsman was the Attending Internist at the Lutheran Hospital in Hot Springs, and from 1937 he served as Attending Physician at the State Soldiers Home Hospital. He was a member of the Staff of Our Lady of Lourdes Hospital and Sanitarium (1923-1940) and the Hot Springs Clinic (1923-1939).

Dr. Morsman was a Diplomate of the American Board of Internal Medicine and held memberships in the American Medical Association, South Dakota State Medical Society and Black Hills District Medical Society. He became a Fellow of the American College of Physicians in 1931, a Life Member in 1935 and served as Governor for South Dakota from 1949 to 1958.

Dr. Morsman's loyalty to the College was evidenced by his attendance at all the sessions and regional meetings. He was very active in developing the membership and activities in South Dakota. He was held in affectionate esteem by every one. To his widow, Mrs. Minnie M. Morsman, the members of the College extend their deep sympathy.

D. L. KEGARIES, M.D., F.A.C.P.,  
Governor for South Dakota

## DR. CHARLES H. NEILSON

Dr. Charles H. Neilson, F.A.C.P., died in St. Louis, Missouri, on August 13, 1958, deeply respected and honored by his associates for his more than fifty years of service to this community and to the St. Louis University School of Medicine.

Born in Ohio on July 19, 1871, Dr. Neilson was educated in his native State, receiving both B.A. and M.A. degrees from Ohio Wesleyan University. He then continued his preparation at the University of Chicago (Ph.D., 1903) and at the Rush Medical College (M.D., 1905).

His teaching career was begun in 1904 in the Department of Physiological Chemistry at St. Louis University, first as Associate Professor and then as Professor. In 1911, after a period of postgraduate study in Germany, Dr. Neilson became Professor and Chairman of the Department of Medicine. He relinquished the administrative responsibilities of the department in 1924, but shortly thereafter became Associate Dean of the Medical School, a position he held until retirement.

Dr. Neilson's distinction as an internist led to his appointment as Physician-in-Chief to the St. John's Hospital, but he was also active in the St. Mary's group of hospitals, the St. Louis City Hospital, St. Anthony's Hospital, and the Alexian Brothers Hospital. At the latter institution, he was for a time the Chief of Staff.

It is of interest that at the time of his death, Dr. Neilson and Dr. P. A. Shaffer, also of St. Louis, were the only surviving charter members of the American Society of Biochemistry. Dr. Neilson served as President of the St. Louis Medical Society, President of the St. Louis Society of Internal Medicine, and Vice-President of the Missouri Medical Society. He became a Fellow of the American College of Physicians in 1920 and was a Diplomate of the American Board of Internal Medicine. Other society memberships included the American Medical Association, American Therapeutics Society, and the Southern Medical Association. He was elected to both Phi Beta Kappa and Alpha Omega Alpha Honorary Fraternities.

Dr. and Mrs. Neilson were married in 1902, had two children (one of whom is a physician and the current President of the St. Louis Medical Society), and together became active leaders in their community. Dr. Neilson's memory will long be held in reverence by his many students, associates, and former patients.

CARL V. MOORE, M.D., F.A.C.P.,

Governor for Missouri.

## DR. EDWIN WILLIAM RODENHEISER

Dr. Edwin W. Rodenheiser, F.A.C.P., a well-beloved pediatrician residing in Gladwyne, Pennsylvania, died in the Bryn Mawr Hospital, September 24, 1958. Dr. Rodenheiser was born in St. Clair County, Illinois, March 31, 1890. Following his graduation from Washington University School of Medicine in 1913, he served internships in the City Hospital, St. Louis, Missouri, and the Philadelphia General Hospital. From 1917 to 1919 he served with Ambulance Company 305, 77 Division, A.E.F., with the rank of Captain.

Dr. Rodenheiser's offices were located in Upper Darby, Pennsylvania. Since its organization in 1927, he was actively associated with the Delaware County Hospital, and was Chairman of the Department of Pediatrics until June, 1956. Other positions which he held in the same hospital included: President of the Medical Executive Staff, Director of the Isolation Department, and Chairman of the BCG Committee. Other appointments held by Dr. Rodenheiser included: Consultant Pediatrician, Misericordia Hospital, Philadelphia, and Chairman of the Medical Advisory Committee, Department of Health of Upper Darby.

In addition to holding membership in county, state, and national medical societies, he was a member of the Philadelphia Pediatric Society and the Blockley Medical

Society. A Diplomate of the American Board of Pediatrics, he was elected a Fellow of the American College of Physicians in 1931.

Dr. Rodenheiser embodied a rare combination of talents as a teacher, executive, and practitioner of pediatrics. His loss is keenly felt by his many friends in the Philadelphia area. He is survived by his wife, Mrs. Virginia F. Rodenheiser, 43 North Righters Mill Road, Gladwyne, Pennsylvania, and a stepson, David McGlensey.

WILLIAM A. JEFFERS, M.D., F.A.C.P.,  
A.C.P. Governor for Eastern Pennsylvania

#### DR. FRANCIS EUGENE SENEAR

Dr. Francis Eugene Senear, F.A.C.P., died of coronary disease on February 11, 1958. For more than forty years he had been an outstanding leader in Chicago medicine. He was born in Salamanca, New York, on November 10, 1889. He received his collegiate and medical education at the University of Michigan. He took a B.S. degree, an M.S. and an M.D., the latter in 1914. He stayed on at Michigan for two years of graduate training. During the last of these two years he was an Instructor.

In 1916 he moved to the University of Illinois College of Medicine as an Instructor of Dermatology and remained with this College until his retirement in 1955. From 1923 to 1955 he was Professor and Head of the Department of Dermatology. Many students, including the writer, remember him as one of the most stimulating and kindly teachers in the history of the College.

He was Attending Dermatologist at the Presbyterian, Illinois Central, Ravenswood and St. Joseph's Hospitals. He had served in the Medical Officer's Reserve Corps since 1916. He was a Special Consultant to the United States Public Health Service.

He was active in dermatological circles both locally, nationally and internationally. He was a member of the American Board of Dermatology and Syphilology from 1939-41, and its President from 1946-51. He was a member of the American Medical Association and its local units. He was Secretary of the Section on Dermatology of the A.M.A. from 1930-32, and its Chairman in 1933. He was a member of the Institute of Medicine of Chicago and the Chicago Dermatological Society. He was President of the latter group in 1927-28. He was a member, and President in 1938, of the American Dermatological Association. He was a member of the Pan-American Medical Congress and President of its Dermatological Congress in 1935. He was President of the American Academy of Dermatology in 1949. He was Editor of the Year Book of Dermatology from 1922-30.

He was a corresponding member of the Danish, Austrian and Swedish Dermatological Societies and an Honorary Member of the Australian, British, Italian and Manhattan Dermatological Societies. He was Honorary Vice President of the International Congress of Dermatology in London in 1952. He belonged to Alpha Omega Alpha, Sigma Xi, Nu Sigma Nu, and became a Fellow of the College in 1924.

This is by no means a complete list of his activities, honors and distinctions, but is representative. He was a skillful clinician, an able scientist, and a great teacher. Probably his greatest attribute was his friendly interest and humanity toward patients and students. He was one of Chicago's greatest physicians.

WRIGHT ADAMS, M.D., F.A.C.P.,  
Governor for Northern Illinois



